

Exhibit 12

DECLARATION OF BRIAN DELAY

Pursuant to 28 U.S.C. § 1746, I, Brian DeLay, declare and state as follows:

1. I am over the age of eighteen (18) years, competent to testify to the matters contained in this declaration, and testify based on my personal knowledge and information.
2. I am an Associate Professor of History and the Preston Hotchkis Chair in the History of the United States at the University of California, Berkeley.

BACKGROUND AND QUALIFICATIONS

3. I received my B.A. from the University of Colorado, Boulder (1994), and my M.A. (1998) and Ph.D. (2004) from Harvard University. My first book, *War of a Thousand Deserts: Indian Raids and the U.S.-Mexican War* (Yale University Press, 2008), won best book prizes from several scholarly organizations. Since 2010, I have been working on three interrelated projects about the historic arms trade: a monograph about the arms trade in the era of American Revolutions (under contract with W.W. Norton and scheduled to be published in 2025); a second monograph about guns, freedom, and domination in the Americas from 1800-1945 (also under contract with W.W. Norton); and a database tracking the global trade in arms and ammunition between the end of the Napoleonic Wars and start of World War I. These projects are grounded in primary-source research in archives in the United States, England, Spain, and Mexico.

4. I have delivered around three dozen presentations on firearms history at universities in the U.S. and abroad, including Harvard University, the University of Chicago, Stanford University, Oxford University, Cambridge University, the University of Melbourne, Doshisha University in Kyoto, Japan, and the Zentrum für Interdisziplinäre Forschung (ZIF), in Bielefeld, Germany. My research on the history of firearms has been supported by grants from the American Philosophical Society, the British Academy, the American Council of Learned

Societies, and the Stanford Humanities Center, among other organizations. In 2019, I was awarded a Guggenheim fellowship.

5. I have been retained by the Office of the Attorney General of Illinois to provide expert testimony in litigation challenging various aspects of Illinois Public Act 102-1116, also known as the Protect Illinois Communities Act. As of the date of this declaration, the scope of my engagement includes providing expert testimony in the following cases: *Harrel v. Raoul*, Case No. 23-cv-141-SPM (S.D. Ill.); *Langley v. Kelly*, Case No. 23-cv-192-NJR (S.D. Ill.); *Barnett v. Raoul*, 23-cv-209-RJD (S.D. Ill.); *Federal Firearms Licensees of Illinois v. Pritzker*, 23-cv-215-NJR (S.D. Ill.); and *Herrera v. Raoul*, 23-cv-532 (N.D. Ill.). I have reviewed the provisions of Public Act 102-1116 being challenged in this case. I am being compensated at a rate of \$400/hour for my work on this matter.

6. In addition to my work as an expert witness on this case, I've served as an expert witness for *Hanson v. District of Columbia*, 22-cv-02256 (D.D.C.); *Arnold v. Kate Brown et. al.*, No. 22CV41008 (Harney Cty. Cir. Ct.); and *Oregon Firearms Federation et al., v. Kate Brown et. al.*, 22-cv-01815 (D. Ore.); all cases challenging limits on high-capacity magazines. A true and correct copy of my curriculum vitae is attached as Exhibit A to this declaration.

PURPOSE AND SUMMARY

7. I have been asked to provide my understanding of the history and regulation of high-capacity firearms in the United States, with an emphasis on the years surrounding 1791 and 1868. For the purposes of this declaration, I use "high-capacity firearms" to mean hand-held arms with a capacity greater than ten rounds, recognizing that Illinois's statute allows up to 15 rounds for handguns. Below I make three basic points. First, high-capacity firearms were merely experimental and, consequently, vanishingly rare in the United States in 1791. Second, while reliable firearms with fixed high-capacity magazines first came on the market in the 1860s, they still accounted for less than 0.002% of guns in the U.S. in 1868. Third, firearms with

removable high-capacity magazines began coming under state and federal regulation soon after they first became commercially available throughout the United States in the 1920s and 1930s.

I. High-Capacity Firearms were Flawed, Experimental Curiosities in 1791.

8. The *Harrel* Plaintiffs in their complaint write that “firearms capable of holding multiple rounds have existed since the 15th century”¹ Technically, that’s true. Inventive gunsmiths had been trying to design reliable, effective firearms capable of shooting multiple rounds without reloading since at least the sixteenth century. Evidence for their efforts can be found in personal and public archives, in patent records, and occasionally in actual weapons still preserved in museums and private collections today. But such weapons were flawed, experimental curiosities prior to the founding of the United States. They were both dangerous (to the shooter, as well as to the target) and highly unusual. Most of these weapons never advanced beyond proof of concept. Only a small minority of large-capacity firearm inventions ever moved past the design or prototype stage, and none achieved commercial significance or military relevance prior to 1791. This centuries-long history of inventive failure has a context, one that ought to be borne in mind when evaluating claims about the historic regulation of firearms—or lack thereof.

A. The elusive quest for reliable high-capacity firearms prior to the 19th century

9. Europeans began engaging with gunpowder and its potential military applications in the thirteenth century. By then, European states had long been in competition with one another for military and economic advantage. As the design and efficacy of artillery, bombs, and handheld firearms improved, and as these improvements forced leaders to reconsider venerable military traditions, states began spending more and more on their militaries. Intensifying competition between sovereigns created powerful incentives for craftspeople and inventors to improve on existing military technology.²

¹ Complaint, *Harrel, et al., v. Raoul, et al.*, 23-cv-00141-SPM (S.D. Ill.), ¶ 67 (hereafter, “*Harrel* Complaint”).

² Geoffrey Parker, *The Military Revolution: Military Innovation and the Rise of the West, 1500-1800*, 2nd ed. (Cambridge University Press, 1996).

10. Sovereign competition fueled innovation. Three of the most important innovations in the seventeenth and eighteenth centuries were: (a) gradual improvements in gunpowder corning, a process that made powder burn more evenly and enabled producers to better modulate its power; (b) the substitution of the cumbersome matchlock ignition system for the more reliable flintlock system in the late seventeenth century; and (c) the development of the socket bayonet (also in the late seventeenth century), which, for the first time, enabled infantry to act both as musketeers and pikemen. All three breakthroughs had significant consequences for the development and use of firearms around the world. Still, most improvements to firearms technology were incremental during the Renaissance and early modern era. Meaningful breakthroughs were very rare.

11. Repeat fire was probably the most coveted but elusive of the gun-making world's aspirations. Safe and reliable increased rate of fire would have been an invaluable force multiplier for militaries before the nineteenth century. States would have paid handsomely to acquire such a comparative advantage, and that prospect incentivized centuries of experimentation. Four basic solutions had come into view as early as the sixteenth century. Each attracted generations of talented gunsmiths, and each had distinct virtues and limitations. The first solution achieved repeat fire with a revolving breech; one innovative design along these lines emerged in Germany in the early sixteenth century. The second approach employed multiple barrels. A seventeenth-century Scot built a gun with a single, fixed breech and fifty barrels arrayed around an axis, for instance. A third design incorporated an internal magazine housing enough powder and (sometimes) balls for multiple shots. Most such arms employed a rotating breechblock to cycle a single powder charge and (sometimes) a single ball into the chamber, before sealing the chamber for firing.³

³ M. L. Brown, *Firearms in Colonial America: The Impact on History and Technology, 1492-1792* (Washington: Smithsonian Institution Press, 1980), 50 (Germany), 100 (Scotland). Of early magazine repeaters, a respected authority says "as all were basically impractical and many quite hazardous to use they were produced in extremely limited quantities and hence all are considered great collector's prizes." Norm Flayderman, *Flayderman's Guide to Antique American Firearms and Their Values*, Ninth edition (Iola, WI: Gun Digest Books, 2007), 691.

12. The fourth approach, the so-called superposed load or stacked charge method, functioned like a roman candle. In the most effective version, lead balls would be drilled through, like beads. Their central canal would be filled with gunpowder or another, slower-burning compound. A regular gunpowder load would then be packed into the barrel of the gun, followed by one of the pierced rounds, then more gunpowder, then another pierced round, and so on, the loader being exceedingly careful to perfectly align the canals of the individual rounds. Upon firing, the first round (the one closest to the muzzle, would ignite the material inside the bore of the second round, which, a fraction of a second later, would communicate flame to the second powder charge (behind the second pierced ball), and so on, until all shots had left the gun.⁴

13. Master gunsmiths made exquisite varieties of repeating arms from the sixteenth through the eighteenth centuries, at high cost. Designs with rotating breeches or multiple barrels seldom exceeded a ten-round capacity, but early magazine or superposed firearms could. Regardless of type, gunmakers often decorated multi-fire weapons lavishly, and sold or gifted them to a tiny stratum of elite consumers across Europe. But most of these weapons remained gorgeous curiosities, usually more suited to admire than to shoot. Prized more than used, early repeating firearms survive at far, far higher rates than do the era's ordinary, single-shot firearms that did actual work in the world. While produced in very small quantities annually, therefore, they accumulated over the centuries of production so that today the world's museums and collectors possess many intriguing specimens.

14. Notwithstanding often brilliant work, no large-capacity firearm design functioned well enough to become militarily and commercially significant before the nineteenth century. These ideas were simply too far ahead of their times. W. W. Greener, one of the English-speaking world's preeminent authorities on firearms history, put it this way: "The advantages of the repeating principle thus appear to have been observed at an early date, and the inventive

⁴ For discussion of some particularly ingenious superposed load designs, see M. L. Brown, *Firearms in Colonial America: The Impact on History and Technology, 1492-1792* (Washington: Smithsonian Institution Press, 1980), 104–6.

genius of the gun-maker would have been equal to producing weapons of the desired type if only the skill and tools of the workman had allowed of a perfect mechanically fitting joint being obtained.”⁵ Most rotating breech mechanisms were complex and exceedingly difficult to make well before moving parts could be built with machine precision. Long-guns festooned with several barrels were too heavy and cumbersome to be practical handheld weapons. Early magazine guns demanded an even higher level of craftsmanship in order to create a perfect seal between the rotating breechblock and the stored powder, lest the combustion in the chamber ignite the magazine. The best, like those made by the Florentine Michele Lorenzoni in the late seventeenth and early eighteenth centuries, minimized these dangers through slow, precise craftsmanship. But early magazine guns were perilous even in the hands of expert gunmakers. Lorenzoni’s countryman, the famed gunmaker Bartolomo Girardoni, reportedly lost his left hand in a magazine explosion.⁶

15. As for muskets with superposed loads, they were mechanically simpler than the alternatives. But roman-candle style bursts of fire had limited utility on the battlefield and no utility off of it. Worse, like all but the best-made magazine arms, superposed load systems were notoriously perilous to the shooter on account of having so much explosive gunpowder packed into a single firearm. If the sequencing between rounds was off, the barrel could explode like a tubular grenade in the shooter’s hands. Smoke was another issue. In the gunpowder era, even regular, single-shot muskets produced clouds of acrid white smoke that obscured battlefield targets. Firing a superposed load just once made that problem five, ten, or twenty times worse (depending on the number of loads). The final major drawback to most superposed load designs was that even when everything went according to plan, the shooter had little or no control over

⁵ W. W. Greener, *The Gun and Its Development*, 9th ed. (London: Cassell and Company, LTD, 1910), 80.

⁶ On early magazine arms specifically, Greener (p. 81) writes: “The peculiar complication of the various mechanisms, and the general inutility of the weapons themselves, render a detailed description of little value to the inventor or the general reader; but the connoisseur will find several varieties in the Paris Museum.” For Girardoni’s accident, see Eldon G. Wolff, *Air Guns*, Milwaukee Public Museum Publications in History 1 (Milwaukee, WI: North American Press, 1968), 27.

the pace of firing. All he could do was point the gun, say a prayer, brace himself for an epic recoil, pull the trigger once, and hope that the eight or ten or twenty charges inside the barrel went in the right direction. Such weapons had little utility outside of formal warfare, and their dangerous drawbacks meant that they were seldom used in martial combat, either.

16. The *Harrel* Plaintiffs offer a few examples of early repeating arms. These include an unremarkable sixteenth-century superposed load gun; magazine arms supposedly issued to a special unit of the English army in 1658 (possible, but the ultimate source for that claim is an assertion made without evidence in a 1985 book, so it is impossible to verify), and what they refer to as “the now-famous ‘Puckle Gun’.”⁷ The Puckle gun is worth lingering over here, because it exemplifies both just how strange and flawed most examples of early modern repeat-fire weapons really were, and how misleading it is to imply otherwise.

17. The gun patented by English lawyer James Puckle in 1718 isn’t exactly famous. But the notoriety it does enjoy today is attributable to gun-rights authors exaggerating its importance and obscuring its context.⁸ Elaborating on what by the early eighteenth century were established rotating breech designs, Puckle devised a clever multi-fire, flintlock ignition gun. It consisted of a long barrel mounted to a tripod, and three removable, rotating breeches. Each of the three breeches had different purposes. One was designed for shooting “grenadoes,” by which Puckle apparently meant shrapnel; one fired standard round balls; and one fired shots cast in the shape of ice-cubes. Puckle intended the balls to be used on Christians, and the cubes to be used against Muslim Turks. Needless to say, this was a design that privileged mystical sectarian posturing over battlefield effectiveness (and aerodynamism). The bulky gun required at least two men to carry and position, making it more like light artillery than a handheld firearm. Sometimes misleadingly billed as the first machine-gun, Puckle’s exotic firearm was not self-loading – the user had to reposition the breech with a hand crank in-between each round. Compared to actual machine guns, it had a glacial rate of fire. Once it had discharged its seven cube-loads, for

⁷ *Harrel* Complaint ¶ 68.

⁸ See for example David B. Kopel, “The History of Firearms Magazines and Magazine Prohibitions,” *Albany Law Review* 88 (2015): 852.

example, the breech had to be removed; each chamber had to be re-loaded with powder, wadding, and shot; the breech had to be carefully re-attached to the gun; and the touch-hole of each chamber had to be re-primed as it came into position prior to each shot. Given that a soldier skilled in drill could fire five or six shots a minute from a smoothbore musket, the Puckle Gun hardly represented a major breakthrough in firearms technology. And that modest assessment assumes that the firearm reliably worked. Charles Ffoulkes, the researcher who re-discovered the Puckle Gun in 1936, had his doubts. Like all rotating breech designs made before the Industrial Revolution, the breech of the Puckle Gun could not be fully gas-proof. In fact, Ffoulkes found the design even more faulty than others with rotating breeches, because the closeness of the chambers heightened the risk of a chain-fire (one charge prematurely igniting the others). The British military seems to have shared Ffoulkes' skepticism. The inventor formed a company to raise investment around his gun, but it never got off the ground. "They're only wounded who have shares therein," quipped one wry contemporary. The interesting, flawed design sunk into deserved obscurity.⁹

18. To be fair to James Puckle, the fundamental material and technological hurdles were beyond anyone's solving in the eighteenth century. To be durable, reliable, affordable, and safe enough to achieve popularity, the experimental designs required metallurgical techniques and a level of machine precision unknown until well into the nineteenth century. Not until the advent of these and other breakthroughs (including the adoption of percussion-cap ignition in the 1830s and metallic cartridges in the 1850s) could repeating firearms become practical weapons of mass production, widespread military adoption, and commercial popularity.¹⁰

19. Neither hustling arms inventors looking to make a fortune nor military and political leaders hunting for battlefield advantage knew that, of course. Hope sprung eternal, on both

⁹ Charles Ffoulkes, *Arms And Armament*, 1945, 82–85. Quote is from W. Y. Carman, *A History of Firearms: From Earliest Times to 1914* (Mineola, N.Y.: Dover Publications, 2004), 80.

¹⁰ For a summary of the basic technological hurdles and how they were finally overcome in the nineteenth century, see Joseph Bradley, *Guns for the Tsar: American Technology and the Small Arms Industry in Nineteenth-Century Russia* (DeKalb, Ill.: Northern Illinois University Press, 1990), 12–19.

sides. That is why numerous historic designs for high-capacity firearms exist, despite the technical and material limitations that prevented any of them from achieving commercial or military relevance.

B. Repeating arms in the colonies and early United States

20. Advances in high-capacity firearm technology usually arose in Europe prior to the nineteenth century, and most varieties of these rare weapons stayed in Europe. Very occasionally, however, high-capacity firearms appear in the documentary record of early America. What are we to make of such evidence? The *Harrel* Plaintiffs conclude that “firearms capable of firing multiple rounds without reloading were well known to the founding generation.”¹¹ They briefly mention two examples to substantiate this claim: a repeater designed by Joseph Belton and a Girardoni air rifle. Put into proper context, these two guns make it clear that the founding generation could only have thought of repeating firearms as flawed curios.

21. Philadelphian Joseph Belton saw an opportunity for military contracts with the outbreak of the American Revolution. In 1775 he pitched an idea for a submersible with cannons that he claimed would sink British ships. Benjamin Franklin recommended Belton and his submersible idea to George Washington, but still the proposal went nowhere.¹² In 1777, Belton tried another approach. He informed the Continental Congress that he had “discover’d an improvement, in the use of Small Armes... which I have kept as yet a secret.” Surviving correspondence suggests that Belton was pitching a superposed load design. Intrigued, Congress placed an order for 100 of these “new improved” guns. Congress cancelled the order a few days

¹¹ *Harrel* Complaint ¶ 69.

¹² See Benjamin Franklin to Silas Deane, Philadelphia, Aug. 27, 1775, and editors’ footnote #2, available here: <https://founders.archives.gov/?q=joseph%20belton&s=1111311111&sa=&r=1&sr=>, accessed Jan. 27, 2023; Benjamin Franklin to George Washington, Philadelphia, July 22, 1776, and editors’ footnote #1, available here: <https://founders.archives.gov/?q=joseph%20belton&s=1111311111&sa=&r=3&sr=>, accessed Jan. 27, 2023; and George Washington to Benjamin Franklin, New York, July 30, 1776, available here: <https://founders.archives.gov/?q=joseph%20belton&s=1111311111&sa=&r=4&sr=>, accessed Jan. 27, 2023.

after extending it, however, and refused to ever reconsider notwithstanding Belton's increasingly desperate appeals.¹³

22. It seems that Congress changed its mind once it heard Belton's exorbitant demands for compensation. Belton requested £500 from each state, a significant sum at the time.¹⁴ But the Continental Congress issued about \$200 *million* in currency during the Revolutionary War (worth somewhere between \$5 billion and \$22 billion today).¹⁵ It clearly had the wherewithal to hire Belton if it had wanted to. Congress could and would have paid his price *if* it believed he and his guns would deliver a meaningful military advantage. That delegates evidently didn't believe this tells us much about the quality of the arms on offer. Buying 100 superposed load arms for a reasonable price might have made sense. Anything more than that was clearly not worth Congress's time.

23. Given the technical challenges afflicting repeat-fire gunpowder weapons, whether rotating breech-, multi-barrel-, magazine-, or superposed load-designs, it is little wonder that one of the only large-capacity weapons from the period that enjoyed even limited, experimental military use in a European army wasn't a true firearm, but rather an air-gun. Using highly compressed air as the propellant, rather than gunpowder, eliminated many of the problems that had long bedeviled the quest for repeating arms. It was a relatively simple enhancement to attach a fixed tubular magazine to the side or underside of the air-gun's barrel, and to feed balls into the chamber (using gravity, by tipping the barrel up), one-by-one with a lever. The shooter could then fire as many rounds as the magazine would hold before needing to reload the fixed

¹³ The relevant correspondence has been digitized and transcribed, and is available here: https://en.wikisource.org/wiki/Correspondence_between_John_Belton_and_the_Continental_Congress, accessed Jan. 27, 2023.

¹⁴ See Joseph Belton to John Hancock, Philadelphia, May 8, 1777, at https://en.wikisource.org/wiki/Correspondence_between_John_Belton_and_the_Continental_Congress, accessed Feb. 4, 2023.

¹⁵ For wartime currency, see Stephen Mihm, "Funding the Revolution: Monetary and Fiscal Policy in Eighteenth-Century America - Google Search," in *The Oxford Handbook of the American Revolution* (Oxford; New York: Oxford University Press, 2013), 334. For present-day value, see <https://www.measuringworth.com/calculators/uscompare/relativevalue.php>, accessed Jan. 27, 2023.

magazine. Depending on the size and pressure of the compressed air reservoir, the shooter might even be able to empty the magazine more than once before needing to refill the propellant. As with other categories of repeaters, air-guns had been produced since at least the sixteenth century and probably earlier.¹⁶

24. The most impressive air-gun of the period was developed in Vienna by one-handed Bartolomeo Girardoni, shortly after the American Revolution. Following his gruesome accident working with magazine firearms, he decided to he'd had enough of gunpowder weapons and transitioned to air-guns. Girardoni made a number of improvements to existing designs, most especially an elegant breechblock mechanism for chambering balls from the attached magazine. Multi-shot air-rifles of his design saw limited service in the Austrian military between the 1790s and 1810s, a special corps of hundreds of snipers being equipped with the weapon. Air-rifles had numerous advantages over gunpowder weapons. In addition to the ease with which they were configured for multi-fire, they required no gunpowder (not always easy to obtain), and the absence of gunpowder meant that their bores required little cleaning and that shots produced no smoke and little noise.¹⁷

25. Nonetheless, air-guns had major drawbacks that consigned them to the status of military oddities and niche consumer items, notwithstanding their significant advantages. Period technology made it difficult to achieve air pressures commensurate with black powder, so power was one concern.¹⁸ The weapons were time-consuming and onerous to prime. Girardoni's air-rifles had to be pumped fifteen-hundred times to fully pressurize one reservoir. Cannisters of pressurized air can explode, much like early gunpowder magazines, producing grenade-like effects. The craft and expense involved in building reliable air-guns greatly exceeded even the

¹⁶ Wolff, *Air Guns*, 5–13. Girardoni's name is commonly misspelled Girandoni. For background on his air rifle, see the learned essay by Robert D. Beeman, "New Evidence on the Lewis and Clark Air Rifle – an "Assault Rifle" of 1803," <http://www.beemans.net/lewis-assault-rifle.htm>, accessed Feb. 4, 2023.

¹⁷ For advantages, see Wolff, 25–30.

¹⁸ According to an article in the *Sportsman's Cyclopedia* from 1831, "For buck or deer shooting the best air gun is not sufficiently powerful; for rook shooting it is very well calculated." Cited in Wolff, 22.

considerable skill required to build fine firearms. Air-tight reservoirs, pumps, valve housings and valve seats had to be made with a degree of precision unknown in most manufactured goods from the era. These material and technical demands greatly increased costs. Moreover, even a craftsman of Girardoni's caliber did not yet have the materials or tools necessary to build the critical components of his design durably and with absolute precision. The air-gun's various delicate parts could easily fall out of order, as for instance when leather gaskets failed or any of the system's metal threads (necessary for attaching the removable air-reservoir to the valve assembly and the valve assembly to the gun) came out of alignment. Competent repairs were hard to secure because the requisite skills were so unusual. According to one of the few book-length studies of historic air-guns, the high cost of these arms and their various limitations made them "a novelty used by people of wealth who had sufficient funds to go in for the unusual."¹⁹

26. For all of these reasons, air-guns were exceedingly rare in eighteenth-century America. Indeed, they were so rare that owners could charge people to see them. Two months after the Second Amendment was ratified, a museum proprietor in New York named Gardiner Baker took out ads in the city's newspapers to promote his latest acquisition: "an air gun, made by a young man, a native of Rhode-Island." According to its new owner, the gun would "do execution twenty times, without renewing the charge," suggesting that it was a single-shot weapon capable of firing twenty individually loaded rounds before needing to renew the compressed air supply. Baker explained that he had purchased the gun "at a very considerable price, with a view eventually to make it the property of the American museum." In order to recoup his investment, he announced that he would "exhibit it to the examination of all persons desirous of viewing it, and of discharging a shot, for which they shall pay six-pence."²⁰

¹⁹ For disadvantages, see Wolff, 30–33. Quote from p. 31. See also John Paul Jarvis, "The Girandoni Air Rifle: Deadly Under Pressure," March 15, 2011, <https://www.guns.com/news/2011/03/15/the-girandoni-air-rifle-deadly-under-pressure>, accessed Feb. 4, 2023.

²⁰ "To the Curious," *The Weekly Museum* (New York, NY), Feb. 11, 1792. A copy of this article is attached as Exhibit B.

27. The *Harrel* Plaintiffs observe that Meriwether Lewis brought a Girardoni Air Rifle on his famous expedition across the continent with William Clark.²¹ The Corps of Discovery seems never to have fired the gun offensively or defensively. None of the more than twenty references to the air-rifle in the expedition's journals involve combat.²² Instead, like virtually every other large-capacity firearm from that period, this unusual weapon was employed as a show piece. Lewis brought the air-rifle on the expedition precisely because it was so uncommon. He hoped a gun that would fire multiple times without powder, flash, smoke, or much noise, would impress Native Peoples. It did. He happily reported that it “excite[d] great astonishment,” which is itself a testament to the weapon's novelty.²³

28. But Indigenous people weren't the only ones fascinated with this exotic air-gun. At the very outset of the expedition near Pittsburgh, “some gentlemen” asked for a demonstration. Lewis obliged, firing the air-gun seven times. But when one of the men took hold of the weapon, he accidentally squeezed off an eighth shot that hit a woman forty yards away, in the head. To his great relief, Lewis found the woman's “wound by no means mortal, or even dangerous.”²⁴ That the gun's eighth round inflicted only a minor wound at forty yards suggests it lost pressure rapidly and might not have actually been able to fire more than ten effective rounds (my criteria for a “large-capacity firearm”).

29. Air-guns remained rare curiosities elsewhere in the U.S. in the early nineteenth century. Just a few months before Lewis and Clark set out, the museum in Connecticut's State House advertised an air-gun as one of its three prime attractions (the others being a wampum

²¹ *Harrel* Complaint ¶ 69.

²² For a discussion of the air gun and the expedition, see Jim Garry, *Weapons of the Lewis and Clark Expedition* (Norman, Okla: The Arthur H. Clark Company, 2012), 91–103.

²³ April 18, 1806 entry by Meriwether Lewis, *Journals of the Lewis & Clark Expedition*, <https://lewisandclarkjournals.unl.edu/item/lc.jrn.1806-04-18#lc.jrn.1806-04-18.01>, accessed Feb. 4, 2023.

²⁴ August 30, 1803 entry by Meriwether Lewis, *Journals of the Lewis & Clark Expedition*, <https://lewisandclarkjournals.unl.edu/item/lc.mult.1803-08-30kloefkorn>, accessed Feb. 4, 2023.

cloak and a sixteen-foot-long snake skin from South America). In no sense were these weapons in common use at the time.²⁵

30. In sum, notwithstanding the great desire of states for military advantage, the great incentives that they held out for inventors who could deliver it, and the centuries of skillful effort that went into chasing those incentives, large-capacity firearms remained militarily and commercially irrelevant throughout the eighteenth and early nineteenth centuries. On those very rare occasions when such weapons were deployed by European militaries, they were issued to dozens or hundreds of men in wars involving tens or hundreds of thousands of combatants. Commercially, the best (and most expensive) examples of high-capacity firearms circulated among a paper-thin slice of Europe's political and economic elite. For almost everyone else at the time, these guns were unknown and irrelevant.

31. I've spent the past twelve years studying the international arms trade in the Age of Revolutions (1763-1825). I have never come across any evidence in primary sources that large-capacity firearms were anything other than exotic curios in this era. Few alive at the time had ever laid eyes on one. Single-shot muzzle-loading smoothbore muskets, rifles, and pistols remained the only handheld firearms that the vast majority of people ever owned, used, or encountered in the late-eighteenth and early-nineteenth centuries. That fact ought to be borne in mind when assessing the absence of laws regulating ammunition capacity at the time the Second Amendment was adopted.

C. Firearms regulation in America prior to 1791

32. Authorities in British North America and in the early United States passed hundreds of laws that directly or indirectly regulated firearms prior to 1791. Nearly all of them were motivated by concerns for public safety. Sometimes they anticipated laws in our own times. For example, colonies and states passed laws regulating the brandishing or carrying of particular weapons; proscribing particular activities with them (dueling, for instance); forbidding firing in

²⁵ "James Steward's advertisement "Museum," in *The Connecticut Courant*, April 27, 1803. A copy of this advertisement is attached as Exhibit C.

certain times and places; magnifying sentences for crimes committed with them; and banning them from sensitive places.²⁶

33. These types of laws, regulating the use of deadly weapons within white communities, reflect public safety concerns familiar to twenty-first century Americans. But regulating gun violence between subjects (or, after independence, citizens) wasn't as significant a policy concern in early America as it is today. Prior to the widespread availability of breechloading weapons and metallic cartridges in the mid-nineteenth century, firearms were awkward tools either for perpetrating or resisting crimes of passion. They were notoriously inaccurate at range and had to be muzzle-loaded with gunpowder and ball before every shot, either by pouring ammunition direct into the barrel or packing in a pre-made paper cartridge loaded with powder and ball. That took time and focus. Moreover, such guns could not be kept safely armed and at the ready for any extended period because black powder corroded iron barrels so quickly. Partly for these reasons, firearms usually played a relatively small role in murders between white people in North America before the era of the Civil War. Randolph Roth, the nation's foremost scholar of the history of homicide in North America, has found for example that only 10-15% of family and intimate partner homicides involved a firearm prior to the mid-nineteenth century. More generally, rates of gun violence rose and fell in step with political instability and shifts in faith in government, justice, and social hierarchy. At its worst, firearms were never used in more than two-fifths of homicides between unrelated white people before the Civil War era. By way of comparison, in 2020 nearly four-fifths of all homicides in the United States involved a firearm.²⁷

²⁶ For a discussion of these laws by category, see Robert J. Spitzer, "Gun Law History in the United States and Second Amendment Rights," *Law and Contemporary Problems* 80 (2017): 55–83.

²⁷ For homicide and arms technology, see Randolph Roth, "Why Guns Are and Are Not the Problem: The Relationship between Guns and Homicide in American History," in *A Right to Bear Arms? The Contested Role of History in Contemporary Debates on the Second Amendment*, ed. Jennifer Tucker, Barton C. Hacker, and Margaret Vining (Washington D.C.: Smithsonian Scholarly Press, 2019), 113–34. For 2020 homicides, see John Gramlich, "What the Data Says about Gun Deaths in the U.S.," *Pew Research Center* (blog), February 3, 2022, <https://www.pewresearch.org/fact-tank/2022/02/03/what-the-data-says-about-gun-deaths-in-the-u-s/>, accessed Feb. 4, 2023.

34. The large majority of pre-1791 laws pertaining to firearms reflect public safety concerns that are (thankfully) alien to our own times. In the first instance, firearms were necessary for the two systematic forms of violent predation that preoccupied generations of European colonists and American citizens: dispossessing Native People of their land and terrorizing and enslaving people of African descent (nearly a fifth of the population in the thirteen colonies in 1775). Neither project could have been sustained without a weapons gap. Moreover, European rivals (the Dutch, French, Spanish, and, after Independence, British) controlled parts of eastern North America and periodically threatened the ambitions and security of British colonists and U.S. citizens. During wartime, these rivals also threatened to arm the Indigenous and African-descent victims of the British and early U.S. project. Anglo authorities before and after Independence used law to try and answer these interconnected challenges to the safety of the white public.

35. The largest category of relevant legislation, hundreds of militia laws, sought to encourage and regulate firearm possession, upkeep, and practice by white men throughout the colonies and states in the early national era. The militia was the primary vehicle for public safety in the colonial and early national era, tasked with collective security needs of a white slaveholding, settler-colonial public periodically menaced by European rivals.

36. Colonial-era militias were state-led, definitionally. Of course, white colonists sometimes came together in armed bodies to pursue collective goals in defiance of government. But those weren't legal militias. The men involved in Bacon's Rebellion (Virginia, 1676) and the Regulator Insurrection (North Carolina, 1766-71), like the participants of Shay's Rebellion (Massachusetts, 1786-87) and the Whiskey Rebellion (primarily Pennsylvania, 1791-94) following Independence, were members of criminal insurrections suppressed by state power. *Militias* were formal, compulsory, selective (almost always confined to able-bodied white men and often excluding or excusing categories of able-bodied white men), and, by definition, deployed for state-sanctioned purposes.²⁸

²⁸ K. Sweeney, "Firearms, Militias, and the Second Amendment," in *The Second Amendment on Trial: Critical Essays on District of Columbia v. Heller*, by Saul Cornell and

37. Authorities in colonial America passed more than six hundred militia laws before the Revolution, laws mandating how these bodies were to be constituted, mobilized, equipped, led, disciplined, and armed. Research in militia returns, census data, and probate records makes it clear that government exerted a powerful influence on the geography of gun ownership in the British colonies, and that it did so primarily through the mechanism of militia laws. Gun ownership was highest in those colonies where governments energetically encouraged and supported militia service. These were places where the violence of slavery and settler colonialism, and/or the threat of nearby imperial rivals inevitably resulted in security concerns. In such places, colonial authorities mandated gun ownership and, in times of heightened anxiety, took steps to equip militiamen who lacked their own arms.²⁹

38. Colonial and early national legislatures also passed numerous laws aimed at depriving Indigenous and enslaved people of access to arms and ammunition.³⁰ Opponents of firearm regulation sometimes point to such laws to argue that early American firearm restrictions were inherently racist.³¹ That framing is misleading, for two reasons. First, it obscures the distinction between law and actual practice. Notwithstanding various prohibitions in colonial and early-national law, Indigenous polities in eastern North America were undoubtedly the best-armed societies on the continent per-capita during the eighteenth and early nineteenth centuries. Most Native men east of the Mississippi had extensive military training with firearms; engaged in commercial hunting as their primary economic activity; owned several firearms over the

Nathan Kozuskanich (Amherst & Boston: University of Massachusetts Press, 2013), 310–82. See also Saul Cornell, *A Well-Regulated Militia: The Founding Fathers and the Origins of Gun Control in America* (Oxford ; New York: Oxford University Press, 2006), 30–37.

²⁹ In addition to Sweeney, see James Lindgren and Justin L. Heather, “Counting Guns in Early America,” *William and Mary Law Review* 43 (2001): 1777; Michael Lenz, “*Arms Are Necessary*”: *Gun Culture in Eighteenth-Century American Politics and Society* (Köln: Böhlau, 2010).

³⁰ For laws targeting Native and enslaved people, see examples in John C. (John Codman) Hurd, *The Law of Freedom and Bondage in the United States* (Boston: Little, Brown & Co., 1858), 1:234, 243–44, 257, 288, 302–6; Sally E. Hadden, *Slave Patrols: Law and Violence in Virginia and the Carolinas* (Cambridge, Mass.; London: Harvard University Press, 2003), 37.

³¹ See for example Clayton E. Cramer, “The Racist Roots of Gun Control,” *Kansas Journal of Law & Public Policy* 4, no. 2 (1995 1994): 17–26.

course of their lifetimes; and consumed significant amounts of gunpowder every year.

Notwithstanding periodic war-time embargos, European traders and authorities in North America made these goods available to Native consumers both as a matter of commerce and of politics.³²

39. Enslaved people didn't have remotely the same access to firearms and ammunition, of course. But guns are tools as well as weapons. Enslavers often wanted their human "property" to do work with guns. Consequently, colonial and early national laws contain many exceptions allowing for enslaved people to keep and bear arms if accompanied by a white person, for example, or if they had been issued "a ticket or license in writing from his master, mistress or overseer;" or if they were carrying their owner's firearms from place to place; or if they were using guns to protect crops from birds.³³ Vulnerable South Carolina, a colony with an enslaved majority that was perilously close to Spanish Florida to the south and to the mighty Creek and Cherokee nations to the West, armed enslaved men for military service throughout most of the colonial era.³⁴ There is also ample archaeological evidence for the chasm between law and reality. Excavations at slave quarters at Washington's Mount Vernon and other sites throughout the South often encounter the remains of waterfowl and small game alongside lead shot and flints, indicating that enslaved people routinely supplemented their meager rations by hunting with firearms. First, then, when Cramer observes [9] that "colonies and states utterly prohibited possession or carrying of arms by members of suspect groups," we need to distinguish between legislation and what actually happened.³⁵

³² See David J. Silverman, *Thundersticks: Firearms and the Violent Transformation of Native America* (Cambridge, Massachusetts: Belknap Press, 2016), For the ineffectiveness of most laws against trading arms with Native people, see 15–16.

³³ Quotes are drawn from Mark Frassetto, "Firearms and Weapons Legislation up to the Early 20th Century," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, January 15, 2013), 84.

³⁴ For South Carolina, see John W. Shy, "A New Look at Colonial Militia," *The William and Mary Quarterly* 20, no. 2 (1963): 181; Maria Alessandra Bollettino, "Slavery, War, and Britain's Atlantic Empire: Black Soldiers, Sailors, and Rebels in the Seven Years' War" (Ph.D. Dissertation, Austin, TX, University of Texas, Austin, 2009), 41–50.

³⁵ For gun flints and lead shot in the "House for Families" slave quarters at Mount Vernon, see Laura A. Shick, "An Analysis of Archaeobotanical Evidence from the House for Families Slave Quarter, Mount Vernon Plantation, Virginia" (M.A., United States -- District of Columbia, American University, 2005), 38. For animal remains and hunting, see Mary V.

40. Second and more fundamentally, law is an expression of social values and priorities. Pre-1791 laws targeted Native and Black people not because early American gun regulation was (or is) racist. Laws targeted Native and Black people because early American society was racist. A society built on despoiling and exploiting nonwhite people will inevitably define public safety in racist terms, and construct a legal regime targeting racial others. But whites could also be coded as social threats. When moved to do so by concerns for public safety, colonial and early national authorities were absolutely willing to deprive white people of firearms, too.

41. This is what happened in the early stages of the American Revolution. Patriot committees began disarming white political opponents as early as the fall of 1775. Events in the colony of New York illustrate the pattern. Patriots in Brookhaven, New York, resolved in September 1775 to disarm anyone who dared “deny the authority of the Continental or of this Congress, or the Committee of Safety, or the Committees of the respective Counties, Cities, Towns, Manors, Precincts, or Districts in this Colony.” At this point in the rebellion most residents of New York were likely either loyalists or vainly hoping to remain neutral in the spiraling conflict with Britain, so such disarmament orders theoretically applied to a vast population. In January, 1776, the Continental Congress ordered several hundred-armed minutemen into Queen’s County in upstate New York to disarm loyalists. George Washington ordered General Charles Lee to disarm everyone in Long Island “whose conduct, and declarations have render’d them justly suspected of Designs unfriendly to the Views of Congress.” General Philip Schuyler disarmed “malignants” in the Hudson Valley, mostly Scotch Highlanders loyal to the king. In March of 1776, Congress concluded that nearly the entire

Thompson, *The Only Unavoidable Subject of Regret*: George Washington, Slavery, and the Enslaved Community at Mount Vernon, n.d., 229. For digs more generally, and for the observation that “it is a gross exaggeration to say, as Michael Bellesiles has done, that slaves ‘did not have a single gun,’” see Philip D. Morgan and Andrew Jackson O’Shaughnessy, “Arming Slaves in the American Revolution,” in *Arming Slaves: From Classical Times to the Modern Age*, by Christopher Leslie Brown and Philip D. Morgan (New Haven: Yale University Press, 2006), 183–85.

population of Staten Island consisted of “avowed Foes” and ordered a general disarmament there.³⁶

42. Disarmament was not confined to New York. Frustrated at the results of more targeted efforts, the Continental Congress called for a general disarmament of loyalists on March 14, 1776. It recommended to all the individual colonies that they immediately “cause all persons to be disarmed within their respective colonies, who are notoriously disaffected to the cause of America, or who have not associated, and shall refuse to associate, to defend, by arms, these United Colonies.”³⁷ In addition to New York, Patriot leaders ordered loyalists disarmed in Connecticut³⁸, North Carolina³⁹, New Jersey⁴⁰, South Carolina⁴¹, Pennsylvania⁴², Massachusetts⁴³, Maryland⁴⁴, and Virginia.⁴⁵

43. There were two obvious motivations for the Founding Fathers and likeminded Americans to orchestrate a nationwide disarmament campaign against white political opponents. First, loyalists could of course use their weapons to resist the insurgency and fight for the king.

³⁶ New York examples drawn from Thomas Verenna, “Disarming the Disaffected,” *Journal of the American Revolution*, Aug. 26, 2014.

³⁷ See Congressional resolutions of Tuesday, Jan. 2, 1776, in Worthington Chauncey Ford, ed., *Journals of the Continental Congress, 1774-1789, Edited from the Original Records in the Library of Congress* (Washington, D.C.: Government Printing Office, 1904), 4:205.

³⁸ “An Act for restraining and punishing Persons who are inimical to the Liberties of this and the rest of the United Colonies,” Connecticut Assembly, Dec. 14, 1775, AA: 4:270-72.

³⁹ “Extract of a Letter from the Provincial Council of North Carolina, March 5, 1776,” in M. St. Claire Clarke and Peter Force, eds., *American Archives: Consisting of a Collection of Authentick Records, State Papers, Debates, and Letters and Other Notices of Publick Affairs, the Whole Forming a Documentary History of the Origin and Progress of the North American Colonies; of the Causes and Accomplishment of the American Revolution; and of the Constitution of Government for the United States, to the Final Ratification Thereof. In Six Series ...*, 4 (Washington D.C., 1837), 5:59. [Hereafter AA]. See also AA 5:67.

⁴⁰ “July 1, All persons who refuse to bear arms to be disarmed,” AA 6:1634.

⁴¹ South Carolina Congress, March 13, 1776, AA 5:592. South Carolina went further, ordering that if anyone previously disarmed shall arm himself again, that person would be incarcerated.

⁴² See resolves of the Pennsylvania Assembly for April 6, 1776, AA 5:714.

⁴³ See notes from the Massachusetts Council, May 1, 1776, AA 5:1301.

⁴⁴ See notes from the Baltimore County Committee, March 8, 1776, AA 5:1509.

⁴⁵ Extracts from the Votes of the Assembly [VA], April 6, 1776, AA 6:881.

Second, patriot forces were perilously under-armed and needed whatever guns they could find. This is the reason that George Washington argued for a broad confiscation program, targeting those who “claimed the Right of remaining Neuter” as well as those actively fighting for the crown. Indeed, patriot forces were so desperate for guns early in the war that they sometimes disarmed whites regardless of their political affiliation. In early 1776, Georgia (a tenth colony to add to the list above) dispatched men to search the homes of all “overseers and negroes” throughout the colony, and even those across the river in southern South Carolina, in order to seize all guns and ammunition they found, leaving behind only “one gun and thirteen cartridges for each overseer.”⁴⁶ From Massachusetts in the north to Georgia in the south, guns were taken away from white Americans in the name of public safety—public safety as the founding generation defined it.

44. In sum, early America had a diverse and extensive tradition of regulating firearms in the name of public safety. Why, then, do we find no period laws restricting the size of firearm magazines? The *Harrel* Plaintiffs observe that “there is no historical tradition of prohibiting the manufacture, importation, or sale of magazines capable of holding more than ten rounds.”⁴⁷ Here the *Harrel* Plaintiffs seem to presume a curious and unconvincing theory of historic lawmaking, one where legislators regulated technologies before they had any impact on society. Like their counterparts today, lawmakers from early America preoccupied themselves with actual social phenomena—not the possible implications of experimental technologies. They didn’t spend their time scouring European publications for news about the cutting edge of firearms technology, or hold lengthy debates about the social implications of weapons that few of them had ever seen, and that were not known to have ever been militarily or commercially consequential anywhere in the world.

45. Even if they had been aware that a Philadelphia gunmaker had a secret method of firing twenty superimposed loads with a single pull of a trigger, or that a museum proprietor in

⁴⁶ Allen Daniel Candler, ed., *The Revolutionary Records of the State of Georgia* (Atlanta, Ga.: The Franklin-Turner Company, 1908), 92.

⁴⁷ *Harrel* Complaint ¶ 66.

New York was charging people to see a repeater that fired compressed air, lawmakers in the colonial and early national eras would have had no incentive to craft legislative solutions to these technologies because these technologies had created no social problems. They remained flawed curiosities. The simplest and most accurate explanation for the absence of regulation, therefore, is that high-capacity firearms were much too rare to attract regulatory attention in 1791.

46. An appropriate modern-day analogy might be personal jetpacks. Much as high-capacity firearms did during the eighteenth-century, personal jetpacks have held appeal both for militaries and private consumers for more than a hundred years. That appeal has generated competition in research and development. But jetpacks remain an expensive and experimental curiosity to this day, because of stubborn technological, safety, and practical challenges, including cost. A future historian (or jurist) discovering evidence that a patent was taken out on a jetpack design as early as 1919 (it was); that militaries remained intrigued by the technology throughout the century (indeed, they still are); and that the jetpack commanded enduring popular interest, could conclude that the absence of public regulation reflected an ideological disposition against regulating jetpacks. But the simpler and most accurate explanation would be that jetpacks remained too rare to attract regulatory attention in 2023.⁴⁸

II. High-Capacity Firearms Became Reliable Consumer Items Prior to the Ratification of the Fourteenth Amendment, but Still Accounted for Less than 0.002% of All Guns in the United States in 1868.

47. Firearms technology would undergo dramatic evolution after 1791. Advances in metallurgy, machine tooling, and mass-production associated with the Industrial Revolution enabled gifted firearms innovators and engineers to finally overcome many of the challenges that had frustrated the quest for reliable repeat fire in earlier centuries. New innovations built on one another, such that the period from the 1820s through the 1860s became one of the most productive and dynamic in the history of firearms technology. Nonetheless, even this era of

⁴⁸ Anthony Quinn, “The Fall and Rise of Jetpacks,” Aug. 16, 2022, Royal Aeronautical Society Website, <https://www.aerosociety.com/news/the-fall-and-rise-of-jetpacks/#:~:text=The%20concept%20of%20a%20jetpack,never%20built%20or%20even%20prototyped,accessed Feb. 4, 2023>.

breakneck innovation had its limits. As I explain below, reliable hand-held arms with capacities greater than ten rounds remained exceedingly rare in the United States when the Fourteenth Amendment was ratified in 1868.

A. False starts and repeat-fire pistols

48. The evolution of firearms technology had its false starts after the ratification of the Second Amendment. In 1792, for example, while the new government was reeling from a series of catastrophic military defeats at the hands of Indigenous warriors in the Ohio Country, a Pennsylvanian named Joseph Chambers tried to interest Secretary of State Thomas Jefferson in a superposed load repeater of his design.⁴⁹ “Every nation desiring to possess the means of destroying the greatest number possible of their enemies,” Jefferson responded enthusiastically, “your discovery, if found effectual in experiment, will not want patronage anywhere.”⁵⁰ Put differently, if Chambers could deliver, the inventor would become a very wealthy and influential man. But, like so many who came before (and after) him, Chambers was unable to convince Jefferson or others in the new U.S. government that his firearm was “effectual in experiment.” Chambers had more success during the War of 1812, when the new Department of the Navy purchased a few hundred weapons of his design (different designs all employing superposed loads). Though it isn’t clear any of the guns were ever put to use, the designs were sufficiently intriguing that multiple foreign governments made inquiries. These inquiries concluded that the dangers and disadvantages of superposed loads still outweighed their advantages.⁵¹

⁴⁹ To Thomas Jefferson from Joseph G. Chambers, 13 August 1792. *Founders Online*. National Archives. <https://founders.archives.gov/documents/Jefferson/01-24-02-0274>. [Original source: *The Papers of Thomas Jefferson*, vol. 24, 1 June–31 December 1792, ed. John Catanzariti. Princeton: Princeton University Press, 1990, pp. 290–293.]

⁵⁰ From Thomas Jefferson to Joseph G. Chambers, 5 November 1792. *Founders Online*. National Archives. <https://founders.archives.gov/documents/Jefferson/01-24-02-0539>. [Original source: *The Papers of Thomas Jefferson*, vol. 24, 1 June–31 December 1792, ed. John Catanzariti. Princeton: Princeton University Press, 1990, p. 580.]

⁵¹ For Chambers’ proposal in context, see Andrew Fagal, “The Promise of American Repeating Weapons, 1791–1821,” published online at *Age of Revolutions*, Oct. 20, 2016, <https://ageofrevolutions.com/2016/10/20/the-promise-of-american-repeating-weapons-1791-1821/>, accessed Feb. 4, 2023.

49. In 1821, another American gunmaker, Isaiah Jennings of New York, obtained a patent for a gun with a sliding lock that enabled the shooter to fire superposed loads one at a time—a significant improvement over typical designs. The *Harrel* Plaintiffs note that the *New York Evening Post* heralded Jennings’ invention, though the *Post* seems to have been speculating about the conceptual possibilities of the design when it claimed it could be extended to fifteen or twenty shots.⁵² Jennings actually had two basic models: one that fired four shots, and another, rarer design that fired ten. A distinct, all-metal variant, made in even smaller quantities than the others, held twelve rounds. Jennings contracted with the state of New York in 1828 to deliver 520 of his guns. While ingenious, these select-fire superposed load flintlocks were expensive, mechanically complex, and still prone to the same catastrophic dangers that afflicted all superposed load designs.⁵³ The Jennings repeaters were technological dead-ends with no military or commercial impact.

50. But more lasting changes in firearms technology were underway. One of the most important was the development the percussion-cap ignition system. Around the turn of the century, European chemists developed a new class of highly explosive compounds, dubbed fulminates. Though the potential military applications of these compounds were tantalizing, early experiments demonstrated that they were much too powerful to be used in firearms or artillery as an alternative propellant to gunpowder. In 1805, Englishman Alexander Forsyth had the insight that while fulminates could not yet be used for propulsion, in very small quantities they could be used for ignition. Others soon improved on his idea. By the 1810s, multiple inventors were developing “percussion caps”—small, sealed caps (usually made of copper) filled with fulminate. It was a simple matter to redesign gun locks so that instead of a vice holding a flint, hammers looked like actual hammers. Rather than a pan filled with priming powder, the newly designed hammer would fall upon an iron nipple topped with a percussion cap. The percussion would ignite the fulminate, which would in turn ignite the main gunpowder charge

⁵² *Harrel* Complaint ¶ 70.

⁵³ *Flayderman’s Guide* (9e), characterizes the Jennings Repeating Flintlock as “one of the great military rarities and oddities” (p. 608).

inside the barrel. Percussion caps were inexpensive to mass produce, and far more reliable than flints as a source of ignition. Over the next few decades, militaries around the world would convert their stockpiles of firearms from flintlocks to percussion locks.

51. The advent of percussion cap ignition opened the way for reliable repeating pistols. Relieved of cumbersome hammer-vices, flints, and priming pans filled with loose powder, arms designers saw a path to using the old ideas of multiple, rotating barrels or rotating breeches to make practical weapons for the first time. Improvements in manufacturing and machine tooling made it possible both to build arms from nearly identical component parts, and to manufacture them at greater speed and less cost than ever before. By the 1830s, two types of repeating pistols were entering the market. The first type, skillfully refined and aggressively patented by the inventor Samuel Colt, featured a single barrel with a multi-chambered, rotating breech. Percussion caps were affixed to the rear of each chamber in the breech. The chamber rotated mechanically so that the cap affixed to successive chambers would assume position to receive the hammer's blow and ignite the powder inside each chamber. The second type, pioneered by Ethan Allen, featured three or more barrels that rotated around an axis (either manually or mechanically), the charge for each barrel ignited by a separate percussion cap. Also referred to as "revolvers" early on, these arms eventually came to be known as "pepperboxes." Allen had less success than Colt defending the patent for his basic design, so rival producers of multi-barrel pistols emerged quickly.

52. Because multiple barrels added significant weight, gunmakers usually designed pepperboxes with short, smooth-bore, small-caliber barrels. Pepperboxes were therefore much less powerful and less accurate at range than the rifled, long-barreled Colt revolvers. The Colt's power and range made it an appealing, even revolutionary weapon for cavalry. Mounted units in the U.S. military that had no use for pepperboxes were clamoring for Colt revolvers by midcentury. But pepperboxes were generally reliable, perfectly serviceable at close range, and they cost about a quarter as much as a Colt revolver (\$10-\$12 vs. \$40-50 by the late 1830s). So, by the mid-nineteenth century, pepperboxes had become more commercially successful than Colt's guns. Unlike repeat-fire curiosities in the eighteenth century, pepperboxes and revolvers

had actual social consequences. And these social consequences generated legislation. Responding to rising public safety concerns over the increase in gun violence and the proliferation of concealable weapons (repeating pistols as well as single-shot, percussion-cap pistols, bowie knives, and other weapons), lawmakers across the country sought to regulate conceal-carry. The nation's preeminent historian of gun law in early America calls this "the first wave of modern-style American gun-control laws." More than thirty such laws were enacted around the country between the ratifications of the Second and Fourteenth Amendments.⁵⁴

53. While recognizing the new firepower that repeat pistols made available to U.S. consumers, it is important to be mindful of two important limitations of pepperboxes and revolvers in this era. The first was capacity. Whether the firearm had rotating chambers or rotating barrels, there were practical design limits to how many shots it could fire from a single loading. Guns with too many barrels or chambers became too heavy, clunky, and hard to manage. The vast majority of revolvers and pepperboxes produced in the nineteenth century held seven or fewer rounds. *Flayderman's Guide to Antique American Firearms and Their Values*, now in its 9th edition, is considered the gold standard reference for historic American firearms. That authoritative guide lists only three nineteenth-century revolvers with greater than ten-round capacity. All of them were made in quantities best characterized as "experimental"—probably fewer than three hundred, combined.⁵⁵

⁵⁴ For pepperboxes and revolvers, see Louis A. Garavaglia and Charles G. Worman, *Firearms of the American West, 1803-1865* (Niwot, Colo.: University Press of Colorado, 1998), 95–104, 139–52, 203–20. For law, see Saul Cornell, "Limits on Armed Travel under Anglo-American Law: Change and Continuity over the Constitutional Longue Durée, 1688-1868," in *A Right to Bear Arms? The Contested Role of History in Contemporary Debate on the Second Amendment*, ed. Jennifer Tucker, Barton C. Hacker, and Margaret Vining (Washington: Smithsonian Institution, 2019), 79. Spitzer, "Gun Law History," Table 1, 59-60; 63-64. For the relevant laws, see Frassetto, "Firearms and Weapons Legislation," 20–24.

⁵⁵ (1) The Aaron C. Vaughn Double Barrel Revolver, made in the early 1860s and characterized as "one of the most rare and unusual of American percussion revolvers," held fourteen rounds. Total production: twenty or fewer. (2) The John Walch Navy Model 12 Shot Revolver, made in 1859-1860, chambered twelve rounds (six chambers, each with a double load). Total production: around 200. (3) The Charles E. Sneider two-cylinder revolver, made in the 1860s, held fourteen rounds (in two, seven-shot cylinders). "Quantity unknown; very limited. Extremely rare." See Flayderman, *Flayderman's Guide to Antique American Firearms and Their Values*, 374–75, 514.

54. The second important limitation from mid-nineteenth-century pistols and pepperboxes is that they took a very long time to load. To load a cap-and-ball revolver, the shooter had to fill each chamber with the appropriate measure of gunpowder, insert a ball, compact the ball into the powder charge with a ramming rod, cap the chamber with grease to avoid chain-fire (optional but recommended), and then individually attach percussion caps to each nipple at the back of the chamber.⁵⁶ Pepperboxes had comparably laborious loading procedures. Paper cartridges containing powder and ball could be used to slightly expedite the process, but reloading could still take a minute to a minute and a half.

55. In terms of the damage that a single person can inflict with a firearm (or two), limited shot capacity and lengthy reload times made cap-and-ball revolvers and pepperboxes fundamentally different from today's semi-automatic pistols with detachable, large-capacity magazines. For comparison's sake, consider the handguns used by the killer in the Virginia Tech massacre on April 6, 2007. Using a Glock 19 and a Walther P22 and equipped with multiple magazines (of 15- and 10-round capacities, respectively) Seung-Hui Cho fired 174 shots in 9 minutes, killing 33 people and wounding 17 others before taking his own life.⁵⁷ Mass-murderers in the mid-nineteenth century could hardly have conceived of that kind of firepower.

B. The slow spread of the first successful high-capacity firearm

56. The technological and manufacturing advances that made repeat-fire pistols practical weapons for the first time also enabled new breakthroughs in long arms. Innovations in breech-loading and metallic cartridges proved particularly important. Loading a firearm muzzle-first had three disadvantages. It was hard to do while lying prone, and rising up to reload made one an easier target during combat. It meant that rifles were slow and difficult to load, because lead balls had to be nearly as large as the diameter of the barrel bore if they were to engage the internal grooves (rifling) that gave the round its spin. And it meant that repeat-fire was difficult to achieve, since the only way to feed more rounds into the barrel was through the muzzle. Guns

⁵⁶ For a demonstration, see <https://www.youtube.com/watch?v=B84wI2MKZ2s>

⁵⁷ Violence Policy Center, "Background on Pistols Used in Virginia Tech Shooting," April, 2007. <https://vpc.org/studies/vatechgunsbackgrounder.pdf> Accessed Feb. 1, 2023.

loaded at the breech solved all of these problems. But they were very difficult to build well prior to the Industrial Revolution, mainly because it was so hard to make the breech accessible but also sufficiently sealable to contain explosive gases. Multiple, practical solutions to this problem emerged in the first half of the nineteenth century. In the U.S. alone, inventors patented 135 breech-loading firearm designs between 1811-1860.⁵⁸

57. Metallic cartridges represented another breakthrough. Soldiers, especially, had used paper cartridges of powder and ball for generations. But such cartridges were easy to break, liable to get wet and ruined, and far too fragile to use in any kind of ammunition-feeding device. Once percussion caps came into common use, however, it took little imagination to envision a single, metal object that contained primer, powder, and ball all in one. By the 1850s, inventors began moving from concept to practical application.

58. Flawed but clever designs began to appear that combined attached or internal magazines, metallic cartridges, and mechanisms for the loading of cartridges and ejection of spent cases. This line of innovation culminated in 1860 with the world's first reliable firearm with a greater than ten-shot capacity. It was developed by Oliver Winchester's New Haven Arms Company.⁵⁹ The "Henry," named after Winchester's brilliant gunmaker, Benjamin Tyler Henry, was an ingenious breech-loading, lever-action rifle that could fire sixteen rounds without reloading (one in the chamber and fifteen from an attached, tubular magazine). Refinements to the Henry resulted in an even better gun: the Winchester Model 1866. Throughout the 1860s, none of the viable alternatives fired more than ten rounds. Practically speaking, then, Henrys and Winchester's were the only large-capacity firearms in circulation in the years surrounding the ratification of the Fourteenth Amendment.

⁵⁸ Alexander Rose, *American Rifle: A Biography* (New York, N.Y: Delacorte Press, 2008), 134.

⁵⁹ The Spencer Repeating Rifle, also introduced in 1860 and also destined for military and commercial success, was a seven-shot, lever-action rifle.

59. Company records reveal there were 74,000 Henrys and Winchester 1866s produced between 1861 and 1871.⁶⁰ Notwithstanding the Winchester's ubiquity in Hollywood westerns, the vast majority of these weapons were made to order for foreign armies and exported abroad. The Ottoman Empire alone purchased 50,000 Model 1866s, and another 14,706 went to military purchasers in Europe, Latin America, and Japan during these years.⁶¹ Based on the Winchester's production figures, that would have left only 9,294 high-capacity firearms for domestic consumption in the United States before 1872. Of those, 8,500 were Henrys purchased by or issued to Union soldiers during the Civil War.⁶² These figures suggest (a) that high-capacity firearms went almost exclusively to military buyers through the early 1870s, and (b) that very few were in the hands of private persons that might have used them in ways that attracted regulatory attention.

60. The figures also tell us that even a few years after the ratification of the Fourteenth Amendment, high-capacity firearms constituted a tiny percentage of firearms in the United States. How tiny? Some numbers offer perspective. In 1859, on the eve of the Civil War, the U.S. Ordnance Department counted 610,262 shoulder arms in federal arsenals. Combined, the arsenals of individual states likely contained hundreds of thousands more. Domestic producers made 2.5 to 3 million firearms for the Union during the war, while Union purchasing agents imported 1,165,000 European muskets and rifles.⁶³ The Confederacy imported several hundred-thousand firearms as well. The scale of private gun ownership involves more guesswork, though the U.S. may have had the most heavily armed civilian population in the world after the Civil

⁶⁰ 11k Henrys from 1861-March, 1863; 3k rifles with King's improvements, but without company name, from April 1866-March 1867; and 60k M1866 between 1866-1871. Tom Hall to D. C. Cronin, New Haven, May 18, 1951; Box 8, folder 16, Winchester Repeating Arms Company, Office files (MS:20), McCracken Research Library, Cody, WY.

⁶¹ Export numbers are drawn from Herbert G. Houze, *Winchester Repeating Arms Company: Its History & Development from 1865 to 1981* (Iola, WI: Krause Publications, 2004), 21, 36-41, 51, 59, 65-66, 71, 73, 75.

⁶² For Henrys used in the Civil War, see Pamela Haag, *The Gunning of America: Business and the Making of American Gun Culture* (New York: Basic Books, 2016), 81.

⁶³ Carl L Davis, *Arming the Union; Small Arms in the Civil War* (Port Washington, N.Y: Kennikat Press, 1973), 39, 64, 106.

War. All told, there were certainly more than five million firearms in the U.S. by the early 1870s—probably far more. But even with the implausibly low figure of five million, that would have meant that high-capacity firearms constituted less than 0.002% of all firearms in the United States as late as 1872.

61. Again, I think that the total number of guns in circulation in 1872 was considerably higher than five million, in which case high-capacity firearms would have constituted an even more miniscule percentage of all guns in the U.S. Whether the figure was 0.002% or a something much lower than that, the *Harrel* Plaintiffs are incorrect therefore when they allege that “magazines holding over 10 rounds were commonly possessed already in the 1860s”⁶⁴

III. The Late Arrival and Rapid Regulation of Automatic and Semi-Automatics

A. The era of the slow-load high-capacity firearm, 1870-1900

62. While lever-action rifles took time to make inroads into the U.S. consumer market, they became increasingly popular in the last third of the nineteenth century. Winchester continued to dominate the market. Most other firms that tried to compete in lever-action rifles failed on their own, or were bought out or otherwise outmaneuvered by Winchester’s ruthless corporate savvy (the gunmaker Marlin being the only major exception).⁶⁵ Other rifle makers experimented with alternative designs. For example, Colt’s popular Lightning Slide Action Rifle (around 126,000 produced between 1884-1904) had a twelve- or fifteen-round tube magazine and used a pump-action to cycle rounds into the chamber. Another ingenious Winchester competitor retained the lever-action but incorporated a novel, rotating internal magazine that held twenty-eight or thirty-four rounds. Even with the highest capacity of any repeating rifle ever marketed in the U.S., though, the Evans Lever-Action Rifle enjoyed only modest success in its six-year production run (12,000 produced between 1873-1879).⁶⁶

⁶⁴ *Harrel* Complaint ¶ 71.

⁶⁵ For Winchester’s dominance, see Pamela Haag, *The Gunning of America: Business and the Making of American Gun Culture* (New York: Basic Books, 2016).

⁶⁶ For the Lightning Slide Action and the Evans, see Flayderman, *Flayderman’s Guide to Antique American Firearms and Their Values*, 122–23, 694. Of the Evans, Flayderman writes: “Earliest specimens (extreme rarities with no examples known) held 38 rounds.”

63. In 1898, Florida made it unlawful to “carry or own a Winchester or other repeating rifle or without taking out a license from the county commissioner of the respective counties, before such persons shall be at liberty to carry around with him on his person and in his manual possession such Winchester rifle or other repeating rifle.”⁶⁷ But that law appears to have been unusual. The new rifles seldom seem to have been singled out for regulation on account of their novel high capacity. Why not?

64. The late nineteenth century was an era of slow-load high-capacity firearms. Winchester lever-action rifles and their high-capacity competitors in the last third of the nineteenth century had fixed magazines. Once the internal magazine was empty, the shooter had to reload each round, one by one. As with revolvers (which transitioned away from the laborious cap and ball system to faster-loading metallic cartridges in the 1870s), this round-by-round loading process put a ceiling on the damage a single shooter could inflict on a group of people. Notwithstanding the success of lever-action high-capacity firearms, that ceiling hadn’t gotten dramatically higher since the 1830s. The magazines of most high-capacity rifles held somewhere between ten-fifteen rounds. A person armed with a pair of seven-shot revolvers could fire fourteen rounds without reloading. With the exception of the remarkable but expensive and short-lived Evans rifle, then, a shooter from the time with a repeating rifle had roughly the same capabilities as a shooter with two revolvers in his hands. There were trade-offs, of course. The repeating rifle often had somewhat more power and always had more range and accuracy. Pistols were concealable and easier to use in some circumstances. (Neither arm had the power, range, or accuracy of bolt-action, single-shot rifles that most major militaries of the world continued to favor.)

65. In other words, the advent of Winchester repeaters and their competitors didn’t provoke fundamentally different social problems than those that had been accelerating in the U.S. since the proliferation of revolvers and pepperboxes earlier in the century. The changes

⁶⁷ 1898 Fla. Laws 71, An Act to Regulate the Carrying of Firearms, chap. 4147, § 1: § 1, in Frassetto, “Firearms and Weapons Legislation,” 82.

were of degree, rather than kind. State lawmakers continued to regulate firearms in the name of public safety, as they had since the colonial era. At least forty-eight new laws were passed in the United States between 1868-1903 restricting firearm carry, for example. By the turn of the century, most Americans living in the nation's most populous urban areas were subject to some form of restrictive carry regulations. (Twenty-one more such laws would be enacted between 1900-1934).⁶⁸ Rather than target lever-action rifles, though, lawmakers in this regulatory era usually lumped them together with other kinds of firearms when crafting law. Rifles are invoked alongside other kinds of weapons in Montana's 1879 prohibition against dueling, for instance; in North Carolina's 1869 law against hunting on the Sabbath; in Florida's 1881 law criminalizing the sale of weapons to minors and to those with "unsound minds;" and in unlawful discharge laws in Texas (1871), Wyoming (1879), New Mexico (1886), and Rhode Island (1892).⁶⁹

66. As slow-load high-capacity firearms, lever-action rifles continue to be popular in the United States today. To my knowledge they are rarely subject to special regulation, notwithstanding their high capacities. Section 2C of Illinois criminal statute 5/24-1.9, one of the provisions at issue in this case, specifically exempts firearms that are "manually operated by bolt, pump, lever or slide action" from its definition of "assault weapon."⁷⁰ Section A of Illinois Criminal Statute 5/24-1.10, in its definition of "large capacity feeding device," specifically excludes "an attached tubular device designed to accept, and capable of operating only with, .22 caliber rimfire ammunition." Section A also excludes "a tubular magazine that is contained in a lever-action firearm or any device that has been made permanently inoperable" from the category "large capacity ammunition feeding device." Numerous firearms from the late

⁶⁸ Frassetto, 24–34; Saul Cornell, "The Long Arc of Arms Regulation in Public: From Surety to Permitting, 1328-1928," *UC Davis L. Rev.* 55 (2021): 2591–96.

⁶⁹ Frassetto, "Firearms and Weapons Legislation," Montana: 39; North Carolina: 92; Florida: 76; Texas: 98; Wyoming: 99; New Mexico: 12; Rhode Island: 97. For a nuanced examination of state and local firearm regulations in the second half of the nineteenth century, one attentive to regional difference and minority viewpoints, see Patrick J. Charles, *Armed in America: A History of Gun Rights from Colonial Militias to Concealed Carry* (Amherst, New York: Prometheus Books, 2018), 122–65.

⁷⁰ Section 2C continues, "unless the firearm is a shotgun with a revolving cylinder."

nineteenth century had capacities exceeding ten, in other words, but their slow-load quality made them very different from the firearms commonly subject to regulation today.

67. To appreciate just how different the era of slow-load high-capacity firearms was from our own times, it is instructive to consider which arms among those commercially available before the twentieth century *would* have been subject to regulation under the Protect Illinois Communities Act. It's not a long list. Using *Flayderman's Guide* and excluding guns made in small quantities (fewer than 1000), I cannot identify any firearm that would *definitely* be subject to regulation under Illinois' new magazine limitations. The lever-action Evans Rifle could *arguably* have been subject to the magazine limitations, depending on whether or not the state considered its large and unusual internal magazine a "tubular" device. Based on my reading of the "assault rifle" statute, the Colt 1855 Revolving Shotgun would barely make the list of regulated arms (though only 1100 were ever made, all between 1860-1863).⁷¹

68. Slow-load high-capacity rifles seldom attracted particular regulation because, in an era when revolvers had already become so common, they did not represent a fundamental change in how a single armed individual could threaten public safety. But automatic and semi-automatic weapons with detachable magazines, the world's first viable fast-load high-capacity firearms, did.

B. The era of fast-load high-capacity firearms

69. Lever-action or pump-action rifles require energy transferred from human muscle through an internal mechanism to eject a spent casing and chamber a new round. Likewise single-action revolvers, which require the shooter to pull back the hammer in order to rotate the chamber and position a new round for firing. (Double-action revolvers transfer all this work to the trigger, which when squeezed both rotates the chamber and releases the hammer). Automatic and semi-automatic firearms don't rely on human muscle. Instead, their great innovation is to

⁷¹ 5/24-1.9 includes restrictions on .50 caliber rifles and .50 caliber cartridges that would have pertained to some 19th-century firearms. But .50 caliber rounds charged with black powder did not have the same power as modern .50 caliber rounds with smokeless powder (developed in the late nineteenth century and discussed below).

enlist some of the energy released by the first round to eject the spent casing and chamber the next round.

70. Automatic and semi-automatic firearms first started coming on the market in the 1890s (automatic arms continue to fire as long as the trigger is depressed, while semi-automatic arms require the shooter to squeeze the trigger for each round fired). In addition to advances in machine production, materials science, and precision parts, these revolutionary weapons incorporated three specific innovations. The first was the invention of a reliable mechanism using springs and levers to capture the recoil energy of a fired round in order to chamber the next round. That discovery belongs to Hiram Maxim, creator of the famous Maxim machine gun in 1884. The heavy Maxim gun required at least two people to carry and position, but the idea of using recoil to chamber another round was transferrable to smaller, handheld firearms.

71. Smokeless powder was the second innovation. When fired, black powder leaves residue behind that fouls barrels. This was a manageable annoyance in the era before guns could fire several times a second. With the astonishing rates of fire made possible through Maxim's invention, fouling would be so rapid as to quickly render an automatic fire weapon inoperable. Serendipity intervened to solve this particular problem. In the mid-1880s, right when Maxim was making his breakthrough in harnessing recoil energy, researchers in France perfected a chemical propellant (based on nitrocellulose) that was three times as powerful as black powder, gave off very little smoke, and left behind almost no residue in the barrel. Smokeless powder meant that automatic fire would be a practical technology.

72. Third and finally, automatic- and semi-automatic firearms required a method of feeding cartridges into the weapon. Maxim's machine gun (a heavy device usually placed atop a wheeled carriage) used belts of bullets, stored in crates or boxes. For semi-automatic firearms designed to fire one shot at a time, it would be far more practical to have a magazine. One option was for the weapon to have a fixed magazine: an integral component of the weapon itself, as with the tubular magazines of lever-action rifles. Fixed magazines were impractical for fully automatic weapons, because their high rate of fire would exhaust a fixed magazine almost instantaneously and then the shooter would have to reload, bullet by bullet. But some of the

earliest semi-automatic handguns would be designed around fixed box magazines – the Mauser C96, for example (a German arm introduced in 1896). By the time gunmakers began turning their attention to semi-automatic arms in earnest, however, they had another, more appealing option: detachable magazines. Like self-loading mechanisms and smokeless powder, detachable magazines first emerged in the 1880s and began to be integrated into firearms for the consumer market by the end of the century (timing that helps explain the observation in the *Harrel* Complaint that “magazine bans were unknown in the United States before the 20th century.”⁷²) The first successful firearm with a detachable magazine had been developed by James Paris Lee, to be used with bolt-action rifles. What made detachable magazines so advantageous is that they dramatically accelerated loading. Rather than reloading a weapon bullet-by-bullet (as with lever-action rifles or revolvers), the shooter simply ejected the spent magazine, inserted a full magazine, and resumed firing.⁷³

73. By the early 1890s, then, gunmakers had at their disposal a trio of potent new design features that would become characteristic of most modern automatic and semi-automatic firearms – self-loading mechanisms, smokeless powder ammunition, and detachable magazines. The first pistol to successfully combine all three elements was the Borchardt C-93. Made in Germany in 1893, the Borchardt C-93 had a detachable, 8-round magazine. Competitors were quick to enter the market. John Browning, arguably the most inventive and important of all U.S. gunmakers, finished his first design for a semi-automatic pistol in 1895. Slow to grasp the huge importance of these new guns, Colt declined Browning’s design because the firm didn’t think there wouldn’t be a domestic market for it. Browning tinkered some more and sold the design to Belgium’s Fabrique Nationale. FN produced the gun starting in 1900, with a 7-round detachable

⁷² *Harrel* Complaint ¶ 66.

⁷³ Bolt-action rifles with detachable magazines were adopted by world militaries in the late 1880s and 1890s -- though even as late as 1910, neither the United States Army nor any European army used magazines that exceeded ten rounds as standard service weapons. In the ninth edition of his authoritative treatise *The Gun and its Development* (London: Cassell & Co., 1910), W.W. Greener compared the standard service arms of nineteen countries. Only four (Turkey, Switzerland, Great Britain, and Belgium) employed arms with detachable magazines. See table on pp. 736-37.

magazine, and would go on to sell more than 700,000 of them over the next decade.⁷⁴ Colt soon realized its mistake and revived its partnership with Browning, marketing better and better versions of his semi-automatic pistols starting in 1900. These culminated with the M1911, a handgun with a 7-round detachable magazine. The most copied and influential of all modern handguns, several million M1911s have been sold in the past century. Variations of the gun is still in production today.

74. American firms also helped lead the way in the production of semi-automatic rifles. Winchester and Remington both had models out early in the century. As with the early semi-automatic handguns, some designs had fixed magazines and others had detachable magazines. Light, fully automatic guns (so-called “sub-machine guns”), migrated from the battlefield to the U.S. civilian market. The most notorious was the Thompson submachine gun, aka the “Tommy Gun,” which entered the U.S. market in the 1920s. It was a select fire weapon, meaning it could be set either to automatic or semi-automatic fire. Tommy Guns had box magazines ranging from twenty to thirty rounds, and drum magazines as large as one hundred rounds. Its high price discouraged civilian sales. But this legal, fast-load high-capacity firearm became much sought-after by criminals and law enforcement.

75. Because their detachable magazines enabled shooters to load and reload all at once, rather than round by round, the new fast-load firearms empowered individual shooters to inflict far more damage on more people than had been possible with earlier technologies. So, as they had with the advent of multi-fire pistols in the nineteenth century, lawmakers responded to the novel threat to public safety with legislation. Between 1925 and 1933, twenty-eight states passed laws against fully automatic firearms.⁷⁵ In 1934, Congress passed the first significant federal firearm law in the nation’s history, regulating fully automatic weapons along with several other kinds of guns.

⁷⁴ John Walter, *Hand Gun Story* (Barnsley: Frontline Books, 2008), 220–28.

⁷⁵ Spitzer, “Gun Law History,” 68.

76. Despite the great variety of models produced, prior to the 1930s surprisingly few of the new firearms came with magazines that held more than ten rounds. Perhaps partly because high-capacity magazines were unusual at this time, lawmakers worried about the implications of semi-automatic weapons for public safety do not seem to have conceived of magazines as something they could productively regulate separately from the guns themselves. And yet many clearly thought that the magazine capacity of these firearms was one of the things that made them so dangerous. So those states that did take action regulated the arms themselves, often addressing magazine capacity in the process.

77. Of the seven states that passed laws restricting semi-automatic weapons during the 1920s and 1930s, five of them incorporated capacity ceilings into the law. Different states set different limits, presumably reflecting the different circumstances and views prevailing among their constituents. For Ohio the limit was eighteen. Michigan put it at sixteen. Rhode Island set the limit at twelve. Virginia's limit was seven. South Dakota forbade guns "from which more than five shots or bullets may be rapidly, or automatically, or semi-automatically discharged from a magazine." Three other states – South Carolina, Louisiana, and Illinois – crafted laws that leave a slight ambiguity as to whether they only applied to automatic firearms. But all three chose the relatively low figure of eight rounds for their ceiling, something a fully-automatic weapons could spit out in a single second. That strongly suggests that they, too, had decided to respond to the novel public safety implications of semi-automatic firearms by regulating them.⁷⁶

78. In so doing, these lawmakers acted consistently with American tradition and practice dating back to the early colonial era.

⁷⁶ Spitzer, 68–71.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on Feb. 24, 2023 at Alhambra CA.

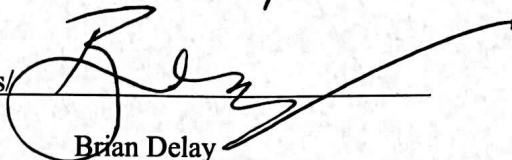
/s/ 
Brian Delay

EXHIBIT A

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ACADEMIC POSITIONS

- Preston Hotchkis Chair in the History of the United States, UC Berkeley: 2016-Present
- Associate Professor of History, University of California, Berkeley: Fall 2010 - Present
- Assistant Professor of History, University of California, Berkeley: Fall 2009 – Spring 2010
- Assistant Professor of History, University of Colorado, Boulder: Fall 2004 – Spring 2009
- Lecturer in History, Harvard University: Spring 2004

EDUCATION

- Ph.D., Harvard University, Cambridge, MA: March, 2004
- MA, Harvard University: June, 1998
- B.A., University of Colorado, Boulder, *summa cum laude*: December, 1994

WORK IN PROGRESS:

- “The Myth of Continuity in American Gun Culture,” law-review article in-progress.
- “Aim at Empire: American Revolutions through the Barrel of a Gun, 1750-1825,” book project under contract with W.W. Norton. 167k words drafted as of 6/22.
- “Means of Destruction: Guns, Freedom, and Domination in the Americas before World War II,” book manuscript under contract with W.W. Norton. Research nearly complete.
- “PATH: The Project on Arms Trade History.” Since 2008, I have been working with student research assistants to quantify the global arms trade, from the Napoleonic Wars to WWI. We have been extracting detailed import and export data from manuscript sources and, especially, from annual customs reports published by the main arms-exporting states: The United Kingdom, the United States, Belgium, and France (Germany and Spain still underway). We are nearly finished locating sources and doing the laborious work of data entry. Our relational database now has nearly 112,000 entries capturing the global movement of all kinds of war material, from percussion caps to artillery, from 1815-1915. We will soon shift to data analysis and begin applying for external funding to turn the dataset into an online tool freely available to researchers around the world.

PUBLICATIONS AND RESEARCH

Refereed Publications

- “The Arms Trade & American Revolutions,” forthcoming in the *American Historical Review*.
- “Foreign Relations between Indigenous Polities, 1820-1900,” in Kristin Hoganson and Jay Sexton, eds., [*The Cambridge History of America and the World, Vol 2: 1812-1900*](#) (Cambridge University Press, 2022), 387-411.
- [*“Indian Polities, Empire, and Nineteenth-Century American Foreign Relations”*](#) *Diplomatic History* 39:5 (December 2015), 927-42.

Refereed Publications (cont.)

- “Watson and the Shark,” chapter in Brooke Blower and Mark Philip Bradley, eds., [*The Familiar Made Strange: American Icons and Artifacts after the Transnational Turn*](#) (Ithaca: Cornell University Press, 2015).
- “Blood Talk: Violence and Belonging in the Navajo-New Mexican Borderland,” in Juliana Barr and Edward Countryman, eds., [*Contested Spaces of Early America*](#), University of Pennsylvania Press, 2014, pp. 229-256.
- Editor, [*North American Borderlands*](#). Routledge, 2012.
- [*War of a Thousand Deserts: Indian Raids and the U.S.-Mexican War*](#). New Haven: Yale University Press, 2008 [paperback, 2009].
- “[The Wider World of the Handsome Man: Southern Plains Indians Invade Mexico, 1830-1846](#),” *Journal of the Early Republic* 27 (March, 2007), 83-113
- “[Independent Indians and the U.S.-Mexican War](#),” *American Historical Review* 112 (Feb., 2007), 35-68.

Other Publications:

- “Utilitarian, State-Led, and Collective: American Gun Culture on the Eve of Revolution,” essay forthcoming in [*The Panorama*](#), 2023.
- “American Guns, Mexico’s Trials,” [*Bulletin of the American Academy of Arts and Sciences*](#), Spring, 2020
- “[A Misfire on the Second Amendment](#),” extended review of Roxanne Dunbar-Ortiz, *Loaded: A Disarming History of the Second Amendment* for *Reviews in American History* 47:3, Sept. 2019
- Co-author with James West Davidson, William E. Gienapp, Christine Leigh Heyrman, Mark H. Lytle, and Michael B. Stoff, [*Experience History: Interpreting America’s Past*](#) [Formerly *Nation of Nations: A Narrative History of the American Republic*], McGraw-Hill (9th ed., 2019). *Concise version: [*US/A History*](#) (9th ed., 2022).
- “[How the U.S. Government Created and Coddled the Arms Industry](#),” *The Conversation*, October 2017
- “[How Not to Arm a State: American Guns and the Crisis Of Governance In Mexico, Nineteenth and Twenty-First Centuries](#)” [24th Annual W.P. Whitsett Lecture], *Southern California Quarterly* 95:1 (Spring 2013), pp. 5-23.
- “Oportunismo, ansiedad, idealismo: los impulsos Estadunidenses durante la intervención Francesa en México,” in Jean Meyer, ed., *Memorias del Simposio Internacional 5 de Mayo*, El Colegio de Puebla, 2013, pp 269-288.
- “Comanches in the Cast: Remembering Mexico’s ‘Eminently National War,’” in Charles Faulhaber, ed., *The Bancroft Library at 150: A Sesquicentennial Symposium*, Berkeley: University of California Press, 2011.
- “How Indians Shaped the Era of the U.S.-Mexican War,” abbreviated version of Independent Indians and the U.S.-Mexican War,” in Pekka Hämäläinen and Benjamin H. Johnson, eds., *Major Problems in the History of North American Borderlands*, Wadsworth, 2011.
- [Response](#) to Daniel Walker Howe, Andrés Reséndez, Ned Blackhawk, and Leonard Sadosky’s essays in H-SHEAR roundtable on *War of a Thousand Deserts*, Nov. 2010.

Other Publications (cont.)

- [Top Young Historian essay](#), Historians News Network, October 2010.
- [“Forgotten Foes,”](#) *Berkeley Review of Latin American Studies* (Fall 2010), 14-19.
- [“James Madison and the Scolds,”](#) Review of J. C. A. Stagg, *Borderlines in the Borderlands: James Madison and the Spanish American Frontier, 1776-1821*, *Passport* 40:3 (January 2010).
- [“Why Mexico Fought,”](#) review of Timothy J. Henderson, *A Glorious Defeat: Mexico and its War with the United States*, *Diplomatic History* 33:1 (January 2010).
- [“19th Century Lessons for Today’s Drug War Policies,”](#) *The Chronicle Review*, Tuesday, July 28, 2009,
- [“It’s Time We Remembered the Role of Indians in the U.S.-Mexican War,”](#) *History News Network*, 3/9/2009
- [“War of a Thousand Deserts,”](#) on *The Page 99 Test*,
- “Navajo,” “Popé,” and “Pueblo Indians,” in Billy G. Smith, ed. *Colonization and Settlement (1585-1763)*, Volume 2 in the 10-volume *Facts on File Encyclopedia of American History* (2003)
- [“Narrative Style and Indian Actors in the Seven Years’ War,”](#) *Common-Place: The Interactive Journal of Early American History*, 1 (1), September 2000.

PRIZES, HONORS, & AWARDS

- Visiting Scholar, University of Melbourne, October 2017
- Fulbright Distinguished Lecturer, Doshisha American Studies Seminar (Kyoto), 2014
- Bryce Wood Book Award for the outstanding book on Latin America in the social sciences and humanities published in English, Latin American Studies Association, 2010
- HNN “Top Young Historian,” November 2010
- W. Turrentine Jackson (biennial) Award for best first book on any aspect of the history of the American West, Western History Association, 2009
- Robert M. Utley Award for best book published on the military history of the frontier and western North America, Western History Association, 2009
- Southwest Book Award, sponsored by the Border Regional Library Association, 2009
- James Broussard Best 1st book prize, Society for Historians of the Early American Republic, 2008
- Norris and Carol Hundley Best Book Award, Pacific Coast Branch of the AHA, 2008
- The Sons of the Republic of Texas Summerfield G. Roberts Best Book Award, 2008
- Finalist, Francis Parkman Prize from the Society of American Historians, 2008
- Finalist for the Clements Prize for the Best Nonfiction Book on Southwestern Americana, 2008
- Honorable Mention, TSHA Kate Broocks Bates Award for Historical Research, 2008
- Finalist for the PROSE Award in the U.S. History and Biography/Autobiography category, sponsored by the Association of American Publishers, 2008
- Organization of American Historians Distinguished Lecturer, 2008-2011
- Bolton-Cutter Award for best borderlands article, Western History Association, 2008
- Robert F. Heizer Prize for the best article in the field of ethnohistory, 2008

PRIZES, HONORS, & AWARDS (cont.)

- CLAH Article Prize, Conference on Latin American History, 2008
- Stuart Bernath Article Prize, Society for Historians of American Foreign Relations, 2008
- Phi Alpha Theta/Westerners International Prize for Best Dissertation, 2005
- Harold K. Gross Prize from Harvard University for the dissertation “demonstrating the greatest promise of a distinguished career in historical research,” 2004
- University of Colorado Residence Life Academic Teaching Award, 2005
- Derek Bok Center Awards for Excellence in Teaching, Spring 1999 and Fall 1999

GRANTS AND FELLOWSHIPS

- John Simon Guggenheim Foundation Fellowship, 2019-2020
- Marta Sutton Weeks Fellow, Stanford Humanities Center, 2019-2020
- Center for Advanced Studies in Behavioral Sciences Fellowship, 2019-2020 (declined)
- American Council of Learned Societies Fellowship, 2017-2018
- Harry Frank Guggenheim Foundation Fellowship, 2013-14'
- UC Humanities Research Fellowship Grant, 2013-14'
- UC Berkeley CORE Research Bridging Grant, 2012-14'
- Charles A. Ryskamp Research Fellowship, American Council of Learned Societies, 2010-2011
- Donald T. Harrington Fellowship, UT Austin, 2009-2010 (Declined).
- University of Colorado Graduate Committee on the Arts and Humanities Research Grant, 2008.
- American Philosophical Society / British Academy Fellowship, 2008.
- Junior Faculty Development Award, University of Colorado, 2007.
- Bill and Rita Clements Research Fellowship for the Study of Southwestern Americana, Full Year, Clements Center, Southern Methodist University, Dallas, TX, 2005-2006.
- Postdoctoral Fellowship, Full Year, Huntington Library, San Marino, CA, 2005-2006 (Declined)
- Postdoctoral Fellowship, Full Year, Newberry Library, Chicago, IL, 2005-2006 (Declined)
- Packard Foundation Dissertation Finishing Grant, 2002-2003
- American Philosophical Society, Philips Fund Grant for Native American Research, 2001
- David Rockefeller Center for Latin American Studies Summer Grant 2001
- Department of Education Foreign Language Area Studies Grant, 2000-01
- Mellon Summer Field Research Travel Grants, 1999, 2000, 2001
- Harvard History Department Summer Travel Grant, 2000, 2001
- Graduate Society Term Time Research Fellowship, Spring 2000
- Harvard Graduate Student Council Summer Travel Grant, 1999
- The Charles Warren Center Fellowships for Summer Research, 1998, 1999
- The Graduate Society's Summer Fellowship, Harvard University, 1998
- General Artemas Ward Fellowship, Harvard University, 1996-97, 1997-98

BOOK REVIEWS

- Review of Jonathan Grant, *Between Depression and Disarmament: The International Armaments Business, 1919-1939*, in the *American Historical Review* 25:3, June 2020
- Review of David J. Silverman, *Thundersticks: Firearms and the Violent Transformation of Native America*, in the *American Historical Review*, Oct. 2017
- Review of Rachel St. John, *Line in the Sand: A History of the Western U.S.-Mexico Border*, in the *Pacific Historical Review*, Aug. 2012.
- Review of *Bridging National Borders in North America: Transnational and Comparative Histories*, Edited by Benjamin H. Johnson and Andrew R. Graybill, *Hispanic American Historical Review*, Feb. 2012.
- Review of *Fiasco: George Clinton Gardner's Correspondence from the U.S.-Mexico Boundary Survey, 1849-1854*. Edited David J. Weber and Jane Lenz Elder, *New Mexico Historical Review* 86:3, Summer 2011, 526-28.
- Review of Juliana Barr's *Peace Came in the Form of a Woman: Indians and Spaniards in the Texas Borderlands*, for the *American Historical Review* 113 (June 2008), 878-79.
- Review of Samuel Truett's *Fugitive Landscapes: The Forgotten History of the U.S.-Mexican Borderlands*, for *Labor: Studies of Working-Class History of the Americas* 4:4 (2007), 130-32.
- Review of Gary Clayton Anderson's *The Conquest of Texas: Ethnic Cleansing in the Promised Land, 1820-1875*, for the *Journal of American History* 93:2 (2006), 530-31.
- Review of Samuel Truett and Elliott Young, eds., *Continental Crossroads: Remapping U.S.-Mexican Borderlands History*, for the *Hispanic American Historical Review* 86:4 (2006), 864-65.
- Review of Rosemary King's *Border Confluences: Borderland Narratives from the Mexican War to the Present*, for *New Mexico Historical Review*, Fall 2005.
- Review of Edward A. Goodall, *Sketches of Amerindian Tribes, 1841-1843*, for *Itinerario: The European Journal of Overseas History*, Fall 2004 (28:3).
- Combined review of Alex D. Krieger's *We Came Naked and Barefoot: The Journey of Cabeza de Vaca Across North America* and Rolena Adorno's and Patrick Charles Pautz's *The Narrative of Cabeza de Vaca* for the *Southwestern Historical Quarterly*, April 2004.
- Review of Richard Flint's "Great Cruelties Have Been Reported:" *The 1544 Investigation of the Coronado Expedition*, for the *Southwestern Historical Quarterly*, October 2003.
- Review of Allen G. Hatley's *The Indian Wars in Stephen F. Austin's Texas Colony, 1822-1835*, for the *Southwestern Historical Quarterly*, October 2001.

PRESENTATIONS & INVITED TALKS

- Roundtable participant for "After 1800: Rethinking Revolution and Counter-Revolution in the Atlantic World," USC/Écoles des Hautes Études en Sciences Sociales, June 2022
- Roundtable participant for "Empire and U.S. Foreign Relations," Society for Historians of American Foreign Relations, June 2022
- "Tribe and Nation in North America," comment for [roundtable](#) on Sumit Guha's *Tribe and State in Asia through Twenty-Five Centuries*, Institute for Historical Studies, UT Austin, November 2021.

PRESENTATIONS & INVITED TALKS (cont.)

- “What is History Now,” Roundtable participant at UC Berkeley History Colloquium, October 2021
- “Tsiyu Gansini’s Predicament: Guns, Ammunition, & Cherokee Choices before the Revolution,” Rocky Mountain Seminar in Early American History, Oct., 2021
- “Aim at Empire,” talk at the UC Berkeley Institute for International Studies, Sept. 2021
- Roundtable participant in “the U.S.-Mexican Borderlands” for Janet Napolitano and Daniel Sargent’s class “Intro to Security Policy,” GSP, Berkeley, Sept. 2021
- “Arms Trading and American Revolutions,” paper for roundtable on Transnational Revolutionary History, Society for Historians of the Early American Republic, July 2021
- Roundtable on Armed Conflict and Military History, Society for Historians of American Foreign Relations annual conference, June 2021.
- “[Guns Across Borders](#),” presentation at Revolutions Across Borders symposium, Newberry Library, June, 2021.
- “[Indigenous Agency, Whiggish History, and ‘the Conquest of Mexico,’](#)” American Historical Association, Jan. 2021
- “Arms Trading and the Fates of American Revolutions,” invited paper given in the Cambridge University American History Seminar, March 1, 2021
- “Indigenous Agency, Whiggish History, and ‘the Conquest of Mexico,’” Conference on Latin American History, Jan. 2021
- “Aim at Empire,” presentation at the Stanford Humanities Center, December 2019
- “America’s Guns, Mexico’s Trials,” Morton Mandel Public Lecture given at the invitation of the American Academy of Arts and Sciences, Berkeley, CA, Nov. 20, 2019
- “Arms Trading & New World Decolonization,” paper presented at University College, London, May 2019.
- “The Texas Gun Frontier & the Travails of Mexican History,” keynote at the 1st Biennial Symposium on Borderlands & Borders, Texas A&M University, San Antonio, April 2019
- “Guns and Revolution: The Arms Trade and the First Global Wave of Decolonization,” Boston College, September 2018
- “Migration and the History of Immigration Enforcement on the U.S.-Mexican Border,” at conference on Borders, Borderlands, and Migration, Institute of Slavic, East European, and Eurasian Studies and the Central European University, UC Berkeley, Sept. 2018
- “Shoot the State,” roundtable presentation at the Western History Association, Nov. 2017
- “The Texas Gun Frontier and the Travails of Mexican History,” Gary L. Nall Lecture, West Texas A&M, October 2017
- “Guns and Revolution: The Arms Trade and the Making of American Revolutions, 1774-1825,” University of Melbourne, October 2017
- “Dam-Breaking: How the Arms Trade Enabled the First Global Wave of Decolonization, 1775-1825,” New York University, September 2017
- “The Most Dangerous Man You’ve Never Heard Of,” invited presentation at symposium “Small Arms, Big Business: Trading Arms - Political, Cultural and Ethical Dimensions in Historical and Global Perspectives,” Zentrum für Interdisziplinäre Forschung (ZIF), Bielefeld, Germany, June 2017.

PRESENTATIONS & INVITED TALKS (cont.)

- Organizer/chair and presenter for roundtable “Arsenal to the World: The Missing History of the American Arms Trade,” OAH April 2017
- “The Ungovernable Rio Grande,” Cal History Homecoming talk, February 2017
- “The Texas Gun Frontier and the Travails of Mexican History, or, No More Weapons! (Unless they’re for Us),” CENFAD Colloquium, Temple University, January 2017
- “The Texas Gun Frontier and the Travails of Mexican History, or, No More Weapons! (Unless they’re for Us),” University of Connecticut, October, 2016
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” Harvard University, October 2016
- “How Transimperial Arms Bazaars Stabilized Instability in the Greater Caribbean,” Rothermere Institute, Oxford University, May 2016
- “The International Arms Trade and the Brittle State in Mexico, 1810-1920,” University of Chicago Latin American Seminar, December 2015
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” Northwestern University, December 2015
- “Guns and the Making of the Modern Americas,” Stanford University, November 2015
- “The Texas Gun Frontier and the Travails of Mexican History,” University of Texas, Austin, November 2015
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” University of Cincinnati, September 2015
- “Dambreaking: Guns, Capitalism, and the Independence of the Americas,” Society for Historians of American Foreign Relations, Conference Keynote, June 2015
- “War of a Thousand Deserts,” San Jacinto Symposium, Houston, TX, April 2015
- “Dambreaking: Guns, Mercantilism, and the Demolition of Europe’s America,” the James P. Jones endowed lecture, Florida State University, March 2015
- “Dambreaking: Mercantilism, Armaments, and the Demolition of Europe’s America,” Indiana University, October 10, 2014
- “Gotham’s Gun Barons: New York City Arms the Americas, 1865-1934,” Doshisha University, Kyoto, Japan, July 25, 2014
- “How Borderland Indians Shaped the Era of the U.S.-Mexican War,” Keynote address for the 2014 Doshisha American Studies Seminar, Kyoto, July 26, 2014
- “War and Trade,” Roundtable on new histories of trade, Society for Historians of American Foreign Relations, Lexington, June 2014
- “Gotham’s Gun Barons: New York City Arms the Americas, 1865-1934,” Cambridge University, November 25, 2013
- “A Protest of Arms: Guns and the Brittle State in Mexico, 1810-1920,” Cambridge University Borderlands Workshop, November 11, 2013
- “Gotham’s Gun Barons: New York City Arms the Americas,” Oxford University, October 21, 2013
- “Marcellus Hartley: The Most Dangerous Man You’ve Never Heard Of,” OAH April 2013
- “A Good Story,” invited presentation to admitted students at Cal Day, April 20, 2013

PRESENTATIONS & INVITED TALKS (cont.)

- “Beware the Metanarrative; or, How I Acquired My Resistance to Resistance,” Kaplan Lecture, University of Pennsylvania, March 2013
- “Domestic Dependent Notions: American Indians and the First Few Pages of American Empire,” American Studies Association meeting, San Juan, Nov. 2013
- “Indian History and the History of American Foreign Relations,” Society for Historians of American Foreign Relations annual conference, June 2012
- “How Not to Arm a State: American Guns and the Mexican National Project, 1810-1920,” Society for Historians of American Foreign Relations annual conference, June 2012
- “Opportunism, Anxiety, and Idealism: U.S. Impulses during the French Intervention in Mexico,” invited paper at el Simposio Internacional 5 de Mayo de Mexico, Biblioteca Palafoxiana, Puebla, Mexico, May 2012.
- “How Not to Arm a State: American Guns and the Mexican National Project, 1810-1920,” Organization of American Historians annual conference, April 2012
- Chair, roundtable on the state of the field in U.S.-Mexico Borderlands History, Organization of American Historians annual conference, April 2012
- “So Far From God, So Close to the Gun Store: Borderlands Arms Trading and the Travails of Mexican History,” 26th Annual W.P. Whitsett Lecture, CSU Northridge, March 2012
- “War of a Thousand Deserts,” at the Tattered Cover Bookstore, Denver, CO, March 2012
- [“Frontiers, Borderlands, and Transnational History,”](#) presentation at Huntington Library symposium on the Significance of the Frontier in an Age of Transnational History, Feb. 2012 [Audio in file#2]
- “Sailing Backwards on Mexico’s ‘Iron River of Guns’: The Political Economy of the Arms Trade in the 19th and 21st Century’s,” Harvard Kennedy School, Feb. 2012
- “The Drug War and Borderlands History,” Cal Alumni Day, Oct. 2011.
- “Blood Talk: Violence and Belonging in the Navajo-New Mexican Borderland,” invited presentation at Stanford University’s Comparative Wests Seminar, April 2011
- “Blood Talk: Violence and Belonging in the Navajo-New Mexican Borderland,” invited talk for round two of Contested Spaces in Early America symposium, Clements Center for Southwest Studies, Southern Methodist University, Dallas, TX, April, 2011
- “Blood Talk: People and Peoples in the Navajo-New Mexican Borderland,” invited talk at UCLA’s American Indian Studies Center, March 2011
- “Blood Talk: People and Peoples in the Navajo-New Mexican Borderland,” invited talk presentation the USC-Huntington Early Modern Studies Institute and the Autry Museum of Western Heritage, March 2011
- “People and Peoples in Borderland Relations: Blood Talk in New Mexico,” invited talk for Contested Spaces in Early America symposium, McNeil Center for Early American Studies, University of Pennsylvania, Philadelphia, PA October 2010
- “How Indians Shaped the U.S.-Mexican War,” invited talk for the Bay Area Latin America Forum, Berkeley, CA September 2010
- “Indians and the U.S.-Mexican War,” invited talk at Teaching Conference on History, University of North Texas, September 2010

PRESENTATIONS & INVITED TALKS (cont.)

- “Patterns of Violence in Navajo-New Mexican Relations,” Pacific Coast Branch of the American Historical Association annual meeting, Santa Clara CA, August 2010
- “States and Stateless Peoples in George Herring’s *From Colony to Superpower*,” Society for Historians of American Foreign Relations annual meeting, Madison, WI, June 2010
- “Indians, Politics, and 19th-Century American Empire,” UC Berkeley-Stanford-UC Davis faculty dinner, April 2010
- “War of a Thousand Deserts,” invited Keynote Address to the James Rawley Conference in the Humanities, University of Nebraska, Lincoln, April 2010
- “19th Century Lessons for Today’s Drug War Policies,” History as a Resource for Decision Making, UC Berkeley, March 2010
- “Comanches in the Cast: Recovering Mexico's 'Eminently National War, 1830-1846,'” Bancroft Sesquicentennial Symposium, Berkeley, CA, March 2010.
- “Mexico, Native Politics, and the Continuous 19th Century American Empire,” invited talk for the Harvard Symposium on 19th Century Empire, Cambridge, MA April 2009
- “War of a Thousand Deserts: How Indians Shaped the Era of the U.S.-Mexican War,” paper presented to the El Paso History Museum, February 2009
- “War of a Thousand Deserts: How Indians Shaped the Era of the U.S.-Mexican War,” paper presented at the Texas Community College Teachers Association Conference, Austin, Feb. 2009
- “Putting Indians into the U.S.-Mexican War,” paper presented at the Organization of American Historians annual meeting, New York, March 2008.
- “Military History and Non-State Peoples,” roundtable paper presented at the American Historical Association conference, Washington D.C., Jan. 2008.
- “The French and Indian War,” public talk for the High Plains Chautauqua, Greeley, CO, Aug. 8, 2007
- “The Comanche Lens: Seeing Nation States through Tribes on the U.S.-Mexican Borderlands,” invited talk at the University of San Diego Trans-Border Institute, April. 2007.
- “The Comanche Lens: Seeing Nation States through Tribes on the U.S.-Mexican Borderlands,” invited talk at the George and Anne Richards Civil War Era Center, Penn State University, Jan. 2007.
- “Independent Indians, the U.S.-Mexican War, and the Reshaping of North America,” paper presented at the American Historical Association conference, Atlanta, GA, Jan. 2007 (*Panel organizer*)
- “Opportunity Costs: Southern Comanches between Mexico and Texas, 1836-1846,” paper presented at the Filson Institute’s Comparative Borderlands Conference, Louisville, KY, Oct. 2006.
- “The War of a Thousand Deserts: Indians, the U.S.-Mexican War, and the Reshaping of North America,” Clements Center Brown Bag series, Southern Methodist University, Feb. 2006.
- “Independent Indians and Borderlands Scholarship in the Americas” roundtable presentation at the Conference on Latin American History, Philadelphia, PA, Jan. 2006.

PRESENTATIONS & INVITED TALKS (cont.)

- “Comanches in the Cast: Remembering Mexico’s ‘Eminently National War,’ 1830-1846,” paper presented at the Latin American Studies Association Conference, Los Vegas, NV, Oct. 2004
- Invited comment on Marie Duggan’s “Franciscan Missions as Institutions of Economic Development: The Case of California, 1769-1832,” at the Boston Area Latin American Seminar, Dec. 2003
- Invited comment on David J. Weber’s “Spaniards and their Savages in the Age of Enlightenment,” at the Boston Area Latin American Seminar, Oct. 2002.
- “Mexicans, Indians, and Anglo-Americans: Ethnic Conflict and Territorial Expansion, 1776-1854,” paper presented at the Harvard Ethnic Studies Conference, Cambridge, MA, Feb. 2002.
- “Americans Watching: Savage Indians, Suffering Mexicans, and Manifest Failures, 1835-1854,” paper presented at the American Historical Association conference, San Francisco, Jan. 2002.
- “The War of a Thousand Deserts: Indian Power and the Contest for Northern Mexico, 1835-1854,” paper presented at the Conference on Latin American History, San Francisco, Jan. 2002
- “Indian Power and the Fragmentation of Northern Mexico, 1835-1846,” paper presented at the Western History Association Conference, San Diego, CA, Oct. 2001. (*Panel organizer*).
- “Americans Watching: Savage Indians, Suffering Mexicans, and Manifest Failures, 1835-1854,” paper presented at Global America: The New International History Conference, Harvard, April 2001.
- Commentator at roundtable discussion of Fred Anderson’s *Crucible of War* at the Charles Warren Center for Studies in American History, Harvard University, Feb. 2000.

CONSULTING

- Submitted declaration for the Attorney General’s Office of Washington D.C. in defense of district law limiting high-capacity gun magazines in *Hanson et. al., v. District of Columbia* (U.S. District Court of Columbia, Nov. 2022)
- Submitted declaration and testified as expert witness for the Attorney General’s Office of the State of Oregon in defense of state law limiting high-capacity gun magazines in *Joseph Arnold et. al., v. Kate Brown*, (Circuit Court, State of Oregon, Harney County, Dec. 2022)
- Submitted declaration for Attorney General’s Office of the State of Oregon in defense of state law limiting high-capacity gun magazines in *Firearms Federation, et. al., v. Kate Brown, et. al.* (United States District Court, State of Oregon, Feb., 2023).
- Submitted declaration for Attorney General’s Office of the State of Illinois in defense of its law limiting assault weapons and high-capacity magazines in *Harrel et. al. v. Kwame Raoul, et. al.*, (United States District Court for the Southern District of Illinois, Feb. 2023)

TEACHING

Classes Offered at UC Berkeley

- HIST 7a: Lower-division lecture – *North America through Reconstruction*, 2011, 2012, 2015, 2018, 2020, 2021 (always in fall)
- HIST 100: Upper-Division Lecture - *American Encounters*, Fall 2009
- HIST 101: Undergraduate Research Seminar - *Senior Thesis Seminar* Spring 2010; Spring 2012, Spring 2013, Fall 2014, Spring 2022, Spring 2023
- HIST 103: Undergraduate Reading Seminars:
 - *Borderlands in North America*, Fall 2009
 - *The U.S. and Latin America in the 19th C.*, Spring 2012
 - *The Border* (reading seminar), Fall 2016
- HIST 104: Undergraduate lecture/seminar- *The Craft of History*, Spring 2015, Spring 2017
- HIST 135B: Upper-division lecture - *Encounter and Conquest in Indigenous America*, Spring 2019, Spring 2022, Spring 2023
- HIST 280: Graduate Reading Seminars:
 - *Borderlands in World History*, Fall 2011
 - *The Making of the Modern World, through the Age of Revolutions* (Sem.), Fall 2014 (co-taught with Daniel Sargent)
 - *The Making of the Modern World, since the Age of Revolutions* (Sem.) Spring 2015 (co-taught with Daniel Sargent)
 - *Borderlands in North America* (reading seminar), Spring 2015
 - *Native North American History* (reading seminar), Spring 2021
- HIST 285: Graduate Research Seminars:
 - *American History before 1900*, Spring 2013, Fall 2015
 - *Topics in American History*, Fall 2018
- HIST 375: Graduate Sem: *Teaching History at the University* (pedagogy), Spring 2021

Classes Offered at the University of Colorado

- HIST 1015: Lower-Division lecture - *U.S. History to 1865*, Fall 07', Fall 08'
- HIST 1035: Lower-Division lecture - *Honors: United States History to 1865*, Fall 04'
- HIST 2015: Lower-Division lecture - *Early America*, Fall 06'
- HIST 3050: Undergraduate seminar - *The Arms Trade in World History*, Spring 09'
- HIST 3317: Undergraduate seminar - *Interethnic Borderlands in the American West*, Fall 04', Fall 07'
- HIST 4115: Upper-Division lecture - *Natives and Newcomers in the Americas*, Fall 06', Spring 08'
- HIST 4327: Upper-Division lecture - *Novelty, Conflict, and Adaptation in the American Southwest*, Spring 05', Spring 08'
- HIST 4617: Upper-Division lecture - *Native North American History: Origins to 1815*, Spring 05', Spring 07', Spring 09'
- HIST 5106: Graduate Reading seminar - *Colloquium: U.S. History to 1865*, Fall 08'
- HIST 6030: Grad. Reading sem - *Frontiers and Borderlands in the Americas*, Spring 07'

PhD Students (1) = advisor/co-advisor; (2) 2nd reader

- **Current Students:**

- Sophie FitzMaurice (1)
 - Dissertation: “The Material Telegraph: Technology, Environment, and Empire in North America, 1846-1920.”
- J.T. Jamieson (2)
 - Dissertation: “‘A Mere Change of Location’: Emigration and American Culture, 1800-1860.”
- Russ Weber
 - Dissertation: Emotions and the political history of the early republic.
- Kyle Jackson (1)
 - Dissertation: New Orleans and Pan-Americanism before WWI
- Noah Ramage (1)
 - Dissertation: The Cherokee Nation in the late 19th Century
- Annabel LaBrecque (1)
 - “Deep Histories of Salt in North America”
- Julia Frankenbach (1)
 - Indigenous labor in the Bay Area during the Mission Era

- **Former Students:**

- Ariel Ron (2), Glenn M. Linden Associate Professor of the U.S. Civil War Era, Southern Methodist University
 - Dissertation: “Developing the Country: ‘Scientific Agriculture’ and the Roots of the Republican Party” (2012)
- Mattie Harper, Grantmaking Officer, Bush Foundation
 - Dissertation (Ethnic Studies): “French Africans in Ojibwe Country: Negotiating Marriage, Identity, and Race, 1780-1890” (2012)
- Melisa Galván (2), Associate Professor, California State University, Northridge
 - Dissertation: “From Contraband Capital to Border City: Matamoros, 1746-1848,” (2013)
- Allie McLafferty, History Instructor, St. Stephens Episcopal School, Austin, TX
 - Dissertation: “‘A Plumb Craving for the Other Color’: White Men, Non-White Women, and the Sexual Crisis in Antebellum America,” (2013)
- Jennifer Carlson, Associate Professor of Sociology and Government & Public Policy, University of Arizona
 - Dissertation (Sociology): “Clinging to their Guns?: The New Politics of Gun Carry in Everyday Life,” 2013
- Delia Hagen (1), Founder & Director of Hagen Historical Consulting, Missoula, Montana
 - Dissertation: “Northern Plains Borders and the People In Between, 1860-1940” 2015

▪ **Former Students (cont.)**

- Bathsheba Demuth (2), Dean's Associate Professor of History and Environment & Society, Brown University
 - Dissertation: "The Power of Place: Ideology and Ecology in the Bering Strait, 1848-1988" (2016)
- Alberto Garcia (2), Assistant Professor, San José State University
 - Dissertation: "The Politics of Bracero Migration" (2016)
- Robert Lee (2), University Lecturer, Cambridge University
 - Dissertation: "Louisiana Purchases: The U.S.-Indian Treaty System in the Missouri River Valley" (2017)
- Erica Lee (1), Management and Program Analyst at FDIC, Washington, D.C.
 - Dissertation: "Sanctuaries into Fortresses: Refugees and the Limits of Obligation in Progressive-Era America" (2017)
- Javier Cikota (2), Assistant Professor, Bowdoin College
 - Dissertation: "Frontier Justice: State, Law, and Society in Patagonia, 1880-1940" (2017)
- David Tamayo (2), Assistant Professor, University of Michigan
 - Dissertation: "Serving the Nation: Rotary and Lions Clubs, the Mexican Middle Classes, and the Post-Revolutionary State, 1920s-1960s" (2018)
- Julia Lewandowski (1), Assistant Professor, California State University, San Marcos
 - Dissertation: "Small Victories: Indigenous Proprietors Across Empires in North America" (2019)
- Franklin Sammons (1), Assistant Professor, Washington & Lee
 - Dissertation: "Yazoo's Settlement: Finance, Law, and Dispossession in the Southeastern Borderlands, 1789-1820"

SERVICE

University of California, Berkeley History Department

- Search Committees:
 - Native North American History Search Committee, 2021-22'
 - US West Search Committee, 2018-19'
 - 20th Century Latin America Search Committee, 2014-15'
 - U.S. History Search Committee (Chair), 2012-13'
 - Latin America Search Committee, 2011-12'
- Endowed Chairs Committee, 2021-22'
- AC-5 Grad Admissions Committee, 2020-21', 2022-23'
- Governance Task Force Committee, 2014-15'
- Committee on the History Undergraduate Major,
 - 2011-12' (chair, spring 2012); 2015-16'; 2016-17' (chair)
- Honors Committee, 2009-10'
- Admissions Committee, US Field, 2009-10'
- Reentry and Disabled Student Advisor, 2009-10'
- Faculty co-sponsor, with Daniel Sargent, of the Berkeley International and Global History Conference (BIG-H), 2011-2017

Service, cont.

- Co-founder (with Daniel Sargent) and co-organizer (since 2021 with Rebecca Herman) of the [Berkeley Global History Seminar](#), 2010-Present.

University of California, Berkeley, Campus Service

- Senate Liaison for external review of UC Berkeley Department of Ethnic Studies, 2021
- Letters & Sciences Executive Committee, 2020-2023
 - L&S Executive Committee Liaison for the external review of UC Berkeley Department of Slavic Languages & Literatures, 2022
- Berkeley Institute for International Studies (IIS)
 - IIS Directorship Search Committee, 2021
 - IIS Faculty Board, 2020-present
 - IIS Simpson Award Committee, 2012; 2013; 2015 (chair); 2016-2019.
- Bancroft Library
 - Friends of the Bancroft Library Council, 2021-present
 - Bancroft Library Prize Committee, 2015, 2016, 2017, 2019, 2020
- Academic Senate Committee on Committees, 2015 – 2017
- American Cultures Senate Subcommittee, 2011-12'

University of Colorado History Department

- Departmental Undergraduate Studies Committee, 2007-08'
- Departmental Executive Committee, 2006-07'
- Robert G. Athearn Lecture organizer, 2006
- Judge for Colorado History Day, Spring 2005
- History Department Graduate Studies Committee, 2004-05', 2008-09'
- Phi Alpha Theta/History Club Advisor, Fall 2004

Professional Service, Memberships, K-12 and Public Outreach

- Professional Service:
 - Series Editor with Steven Hahn and Amy Dru Stanley for University of Pennsylvania Press book series, "[America in the Nineteenth Century](#)", 2014-present. Within the series, I have had served as faculty editor for the following books, working closely with their authors throughout the process:
 - William Kiser, *Borderlands of Slavery: The Struggle Over Captivity and Peonage in the American Southwest* (2017)
 - Noelani Arista, *The Kingdom and the Republic: Sovereign Hawai'i and the Early United States* (2019)
 - Katherine Bjork, *Prairie Imperialists: The Indian Country Origins of American Empire* (2019)
 - Alaina Roberts, *I've been Here All the While: Black Freedom on Native Land* (2021)
 - Paul Conrad, *The Apache Diaspora: Four Centuries of Displacement and Survival* (2021)

- **Professional Service, Memberships, K-12 and Public Outreach (cont.)**
 - William Kiser, *Illusions of Empire: The Civil War and Reconstruction in the U.S.-Mexican Borderlands* (2021)
 - Editorial Board Service:
 - *Reviews in American History*, 2019-2022
 - *Journal of the Early Republic*, 2020-2022
 - Editorial Board Service, cont.
 - *Journal of the Civil War Era*, 2016-2018
 - *Pacific Historical Review*, 2012-2015
 - *Ethnohistory*, 2009-2012
 - Prize Committees:
 - Robert M. Utley Award Com., Western History Association, 2022-2025
 - Ray Allen Billington Prize Committee, Organization of American Historians, 2017-2019.
 - David J. Weber-Clements Center Prize Committee, Western History Association, 2016-2018.
 - Bernath Lecture Prize Committee, Society for Historians of American Foreign Relations, 2015-2018.
 - Louis Knott Koontz Memorial Award committee, Pacific Coast Branch of the American Historical Association, 2012-15
 - CLAH Article Prize Committee (Chair), Conference on Latin American History, 2012
 - John Ewers Book Prize Committee, Western History Association, 2012
 - Sons of the Republic of Texas, Summerfield G. Roberts Book Award Committee, 2010-2012
 - Western History Association's Huntington-WHA Ridge Prize Committee, 2009-2011.
 - Conference Committees:
 - Conference Planning Committee, Society for Historians of the Early American Republic, 2021
 - Society for Historians of American Foreign Relations, Conference Planning Committee, 2012 and 2013
 - Organization of American Historians, Conference Planning Committee, 2012
 - Society for Historians of the Early Republic, Conference Planning Committee, 2012
 - Local Arrangements Committee, Western History Association Annual Conference, Denver, 2009
 - American Society for Ethnohistory, Conference Planning Com., 2005
 - Manuscript Reviewer for *American Historical Review*, *Ethnohistory*, *Western Historical Quarterly*, the *Journal of American History*, *Modern American History*, *Law and History Review*, *Economics and Human Biology*, *History: the Journal of the Historical Association*, *Journal of the Early Republic*; *Enterprise & Society*; *William & Mary Quarterly*; the *Southwestern Historical Quarterly*; Oxford University Press, Harvard University Press, Princeton University Press,

Manuscript Reviews, cont.

University of Pennsylvania Press, University of California Press, University of Arizona Press, Basic Books, Yale University Press, University of Colorado Press, University of Kansas Press, Cornell University Press, Palgrave & Macmillan; University of North Carolina Press, Duke University Press, University of Virginia Press, University of Tennessee Press, Texas A&M University Press; University of Nebraska Press, Blackwell Publishing, and Rourke Publishing.

- Other Professional Service:
 - Co-Chair, Taskforce on Conference Conduct and Sexual Harassment, 2019, Society for Historians of American Foreign Relations
 - Nominating Committee, Western History Association, 2019-2021
 - External Reviewer for UC Davis Undergraduate Program Review, 2017
 - Secretary and then Chair, Borderlands & Frontiers Studies Committee, Conference on Latin American History, 2011-2012
 - Grant/Fellowship reviews for: National Science Foundation; Comisión Nacional de Investigación científica y tecnológica (Chile)
 - Evaluations and nominations for the MacArthur Fellowship Program
- Member: American Historical Association; Organization of American Historians; Conference on Latin American History; Society for Historians of American Foreign Relations; Society for Historians of the Early American Republic; Western History Association.
- K-12 and Public Outreach:
 - Academic Advisor, Teaching American History Grant “American Democracy in Word and Deed,” Mt. Diablo School District, CA, 2009-2013.
 - Presenter at Teaching American History Grant workshops in Oakland, CA, Dec. 2009, May 2010, and Oct. 2010.
 - Lead Presenter at Teaching American History or Gilder-Lehrman workshops for primary-school teachers in:
 - Hartford, Delaware, June 2012
 - New Orleans / San Antonio, June 2012
 - Chicago, IL (June 2011)
 - Deer Valley, AZ (Feb., 2010)
 - Crescent City, CA (Jan., 2009 and April, 2010);
 - Eureka, CA (Jan., 2009);
 - Huntsville, Alabama (June 2008 and June 2009)
- Media:
 - Hour-long interview with the [History of California Podcast](#), Oct. 2020
 - On-air interview for BBC News World Service on gun law following the massacres in Gilroy, El Paso, and Dayton, August 10, 2019
 - On-air interview for extended program “[The American Gun Industry: A Billion Dollar Business.](#)” Australian Broadcasting Corporation, March 18, 2018
 - On-air interview for BBC Newsday on Remington’s bankruptcy, March 27, 2018

Media, cont.

- On-air interview for “City Visions,” KALW San Francisco, on [youth protests against gun violence](#), March 26, 2018
- On-air interview for BBC Radio 5 on America’s gun business, Feb. 26, 2018
- On-air interview for “The Attitude,” Pacifica Network, on America’s gun business, February 20, 2018
- “[Gotham’s Gun Baron](#),” Spoken essay for BBC Radio Three program *The Essay*, January 2017
- On-screen consultant for German documentary on the U.S. presidency, “Die US-Präsidenten und der Krieg,” produced by Westdeutscher Rundfunk and aired nationally in Germany in November 2016.
- “[Guns, Capitalism, and Revolution in the Americas](#),” 2015 SHAFR keynote address filmed and broadcast on CSPAN’s American History TV, (first aired August 1, 2015).
- Interview with Deborah Lawrence and Jon Lawrence for [Contesting the Borderlands: Interviews on the Early Southwest](#) (University of Oklahoma Press, 2016), 182-200.
- Guest of NPR’s [Backstory, with the American History Guys](#), January 17, 2014
- Invited essay for the *New York Times*’ [Room for Debate](#) feature, July 2, 2013
- Guest on NPR’s “[On Point with Tom Ashbrook](#),” Nov. 7, 2012.
- Guest on PRI’s “[The World](#),” April 12, 2011
- On-screen consultant for “[The Mexican-American War](#),” Oct. 29, 2006, History Channel
- KERA “Think” radio interview on *War of a Thousand Deserts*, 2008.

EXHIBIT B

To the CURIOUS.

AN AIR GUN, made by a young man, a native of Rhode-Island, but now resident in this city, and which has been purchased by the subscriber, at a very considerable price, with a view eventually to make it the property of the American Museum but wishes to reimburse himself in the following manner, viz.

He will exhibit it to the examination of all persons desirous of viewing it, and of discharging a shot, for which they shall pay six-pence.

This gun, when properly filled with air, will do execution twenty times, without renewing the charge, and for several times will send a ball thro' an inch board, at the distance of sixty yards, to be seen at the subscribers, No. 13, Maiden-lane, every day in the week, from ten to twelve o'clock in the forenoon, and from three to five in the afternoon, Tuesday and Friday afternoons excepted, at which time it may be seen at the Museum.

GARDINER BAKER,

February 11, 1792. *Keeper of the Museum.*

EXHIBIT C

MUSEUM.

JOSEPH STEWARD, respectfully informs the public that he still continues to make additions to his collection in the State House in Hartford. Among which are several entertaining paintings. One large historic painting containing fourteen figures.

Among the natural curiosities is the skin of a large snake, from South America, 16 feet in length.

A curious savage Priest's cloak, wrought with wampum and bells after their manner.

An air-gun, shot with great force by air instead of powder.

The attention of gentlemen sailing to foreign parts, is requested, to collect curiosities, and every attention of this kind will be gratefully received and suitably rewarded.

Portrait Painting performed by said Steward as usual, at the Museum, and every attention paid to render it agreeable.

Hartford, April 11th, 1803.